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ABSTRACT

In order to assess the effects of wordprocessing on the writing of first-year students in a college of applied arts and technology, a project at Seneca College of Applied Arts and Technology in Ontario, Canada followed a large population of students as they entered college, were taught to use wordprocessing in their writing, and used it throughout their first academic year. The study draws a profile of the writing background, attitudes, and skills held by the 650 participating students, and documents changes in these aspects over the study period. The report is in two parts. Part 1 (Chapters 1-4) is a summary report; it contains an introduction, outlines purpose, context, method, and conclusions, and reviews findings (which suggest that a broad range of students (1) enjoyed using the wordprocessor, (2) voluntarily used wordprocessing in their own writing apart from college-required writing, (3) saw wordprocessing as a valuable employment skill, and (4) saw wordprocessing as a contribution to their writing). Part 2 (Chapters 5-10) offers detailed information on the literature, methodology, interviews with students, statistical and anecdotal findings, and the writing of the students. (Thirty-nine references; and appendixes which present the survey instrument, interview questions, and writing sample instructions are attached. An annotated bibliography concludes the report.) (SR)

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THE INFLUENCE OF WORDPROCESSING ON THE ATTITUDES AND WRITING OF POSTSECONDARY STUDENTS

Education and Technology Series

Principal Investigators
ANTHONY TILLY
PETER MYERS

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by the Ministry of Education, Ontario.

It reflects the views of the authors
and not necessarily those of the Ministry.

Chris Ward, Minister
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ABSTRACT

The principal investigators studied the effects of wordprocessing on the writing of first-year students in a college of applied arts and technology during the academic year 1986-1987. Writing is defined as the processes and attitudes as well as the products of the writer.

The relatively recent development of microcomputers cheap enough to be used in the college writing program has raised a number of questions concerning both computers and writing. Experience with wordprocessing indicated that the tool added to the writing classroom had effects on the students and their writing that were worth study, and raised a number of questions that could only be answered through research both broader and more comprehensive than the observation of teachers in the classroom -- however essential such observation is in development and change in teaching.

The present study describes a large population of students as they entered college, were taught to use wordprocessing in their writing, and used it through their first academic year. The study draws a profile of the writing background, attitudes, and skills held by the students, and documents changes in these aspects over the period of the study.

After a trial of the method in 1985-1986, in 1986-87, ten faculty volunteered to assist in the study with 29 classes containing about 650 students. In September, all students in the study filled out a survey form to indicate their language and study background, their attitude to writing, their preferred procedures and a self-assessment profile. They then wrote a sample essay by hand in one class period. Five per cent of the students were interviewed by the principal investigators.

During the course of the semester, students were taught by the English faculty to use wordprocessing for their writing, and they were to submit most of their written assignments in wordprocessed form. Wordprocessors were available for student use throughout the semester so that all writing could be produced in this way.

Near the end of the semester, students wrote another essay for the study, this time on the wordprocessor. A second survey form repeated questions on attitude to writing, elicited another self-assessment profile, and asked a series of questions on the learning and adoption of wordprocessing for writing.

Near the end of the second semester, a third survey was mailed to the students, and about 15% replied.

Written comments in the survey and statistical summaries of answers to questions in December and March suggest that a broad range of students

- enjoyed using the wordprocessor in their writing
- voluntarily used the machine and the skills associated in their own writing apart from college-required writing
- saw wordprocessing as a valuable employment skill, if not a life skill, and
- saw wordprocessing as a contribution to their writing.

These factors suggest that the adoption of wordprocessing as a tool for writing may heighten the literacy of the students who use it. Thus a major implication of this study is that wordprocessing can make an important contribution to the writing curriculum in the college of applied arts and technology. But it also invites a substantial change in the writing curriculum and in the roles people play in teaching and learning writing. It is a particular concern that the relatively expensive resource of microcomputers be used most effectively. It is apparent that if a policy of computer literacy is to be put in place, the use of the computer as a writing tool can effect this in a realistic manner. Adoption cannot be undertaken without preparation, however, and any change should carefully be managed to consider and provide for the development of new curriculum and the retraining of faculty.

ACKNOWLEDGEMENTS

In the spring of 1985, the Ministry of Education and the Ministry of Colleges and Universities funded three related research projects on computers and writing. Aviva Freedman undertook a study of wordprocessing in the school system; Robert Laird began research on applications in a university. We began the third study, of the use of wordprocessing in Ontario colleges of applied arts and technology. The three studies complement each other, although their focuses, methodologies, and findings differ considerably.

The research was conducted at Seneca College of Applied Arts and Technology. We would like to thank the college for its support of the project. Frank Daley and Linda Payne, Dean and Chairperson of the English and Communications Division, gave administrative support despite very busy schedules.

We wish to acknowledge the assistance of the faculty of the English and Communications Division of Seneca College of Applied Arts and Technology. Bob Price and Lynn Holmes offered valuable comment and support through two years of study; Jack Burman, Nan Byers-Legate, Elizabeth Mills, Betty Milroy, Ann Montgomerie, Louise Newman, Geoff Spurll, and Joe Stavroff were most helpful in their assistance. The technical skill of Lucia Palumbo saved us many hours of difficult research.

In addition, several people outside the college made valuable comments on the work in progress. To all these, many thanks.

Anthony Tilly
Peter Myers

September, 1987

SUMMARY REPORT

CHAPTER 1

INTRODUCTION

SUBJECT

This report describes a study on the effects of wordprocessing on the writing of first-year students in a college of applied arts and technology. Writing is defined as the processes and attitudes as well as the products of the writer. The study was conducted in 1986-1987.

BACKGROUND

The relatively recent development of microcomputers cheap enough to be used in the college writing program has raised a number of questions concerning both computers and writing. These questions are referred to repeatedly throughout the report, and are indicated in summary form in this introduction.

The immediate background to this study was the incorporation of wordprocessing into the first-year writing courses at one of the campuses of Seneca College of Applied Arts and Technology beginning in 1983. Both principal investigators were involved in that introduction. This experience with wordprocessing indicated that the tool added to the writing classroom had effects on the students and their writing that were worth study; it also raised a number of of questions that could only be answered through research both broader and more comprehensive than the observation of teachers in the classroom -- however essential such observation is in development and change in teaching.

The Use of Wordprocessing in Writing and Writing Programs

Many writers have remarked on changes that occurred in their writing when they adopted the wordprocessor. Some of the comments from professional writers were flaming testimonials to the experience, and a number of metaphors were coined in attempts to describe what apparently happened when one sat down and began to play with the keyboard and the screen. The computer screen was a mirror to the mind; the text on the screen was plastic and malleable as never before; the landscape of the page could be painted and rebrushed -- and so on. Perhaps the metaphors were not original in all cases, and perhaps many writers felt rather than knew they were writing better, but the fact is that the wordprocessor has made a strong impact upon writers.

When it began to be used in the classroom, either as a copy tool, typewriter, or intricate editing machine, the wordprocessor made no less an impact. Students liked to write with the wordprocessor, and teachers liked what they saw happen with students who began to use the machine. Apparently students who would, in the opinion of experienced teachers, normally be estranged or reluctant writers would of a sudden write more and want to write more, and they would attend to features of text production and the processes of writing that they would hardly do when they wrote with pen and paper.

Much anecdotal information of this kind has been gathered over the ten years or so of the general use of wordprocessors, and from the beginning questions were raised as to the nature of changes in writing brought about by the machine -- or whether any changes at all were wrought. Certainly many traditional English teachers viewed these reports with doubts and indignation, not to say alarm and suspicion. Part of the function of this research is not only to document the experience of a large population beginning to use the wordprocessor, but also to answer some of the questions of the most sceptical among the audience.

Studies of Wordprocessing and Writing Change

Many studies, formal and informal, were carried out in this country and in the United States. Most of the studies at the college level were designed to look at relatively small populations. Most mentioned an affective element, but did not focus on how students felt about their writing. On the other hand, studies in composition curriculum were looking more and more to affective aspects of the learning of students in the early postsecondary years.

Writing in the Colleges of Applied Arts and Technology

The colleges of applied arts and technology in Ontario teach a lot of writing: virtually every one of the more than 50,000 students who enter the 22 colleges each year must take at least one semester of writing. Many of these students have access to a microcomputer for writing, though relatively few programs have integrated the tool into the course itself.

This writing course is likely to be designed to teach the student a number of things -- how to correct error, for instance, or how to write for technical, business, or academic purposes, or how to use writing to increase self-knowledge. Writing has an important place in the general study program: the educated person is literate, and while it is a common perception that the colleges of applied arts and technology are training institutions, they are intended to develop autonomous learners -- an educated population. It is a legitimate and valuable question to ask whether the microcomputer as a writing tool has anything significant to contribute toward the achievement of these goals.

STUDY DESIGN

The present study was designed to describe a large population of students as they entered college, were taught to use wordprocessing in their writing, and passed on through the first academic year of postsecondary study. To be valuable, the study needed to find out the writing background, attitudes and skills held by the students, and to document changes in these things over the period of the study. Experience had suggested to us that using the wordprocessor for small bits of time -- 10 minutes a week is common in the public school classroom with only one computer -- would have no value to speak of. The writer needs to have the tool available for virtually all writing before it can be fairly judged. The students in this study would have access to wordprocessors for much longer periods of time than this, though only a relatively short period would be in the classroom where a writing teacher would be present.

In 1985-86, a trial of the method was carried out with the co-operation of three English teachers and about 200 students.

In 1986-87, ten faculty volunteered to assist in the study. Among them they had 29 classes containing about 650 students in September. In September, all students in the study filled out a survey form to indicate their language and study background, their attitude to writing, their preferred procedures, and a self-assessment profile. They then wrote a sample essay by hand in one class period. Five per cent of the students were interviewed by the principal investigators.

During the course of the semester, students were taught by the English faculty to use wordprocessing for their writing, and they were to submit most of their written assignments in wordprocessed form. Wordprocessors were available for student use throughout the semester so that all writing could with relative ease be produced in this way.

Near the end of the semester, students wrote another essay, this time on the wordprocessor. A second survey form repeated questions on attitude to writing, elicited another self-assessment profile, and asked a series of questions on the learning and adoption of wordprocessing for writing.

Near the end of the second semester, a third survey was mailed to the students, and about 15% replied.

IMPLICATIONS

Written comments in the survey testify that a broad range of students enjoyed using the wordprocessor in their writing, and they would voluntarily use the machine and the skills associated in their own writing apart from college-required writing. They saw wordprocessing as a valuable employment skill, if not a life skill, and enjoyed what they saw as a contribution to their writing. These factors suggest that the adoption of wordprocessing as a tool for writing can enhance the literacy and the literacy ethos of the students who use it. As a number of commentators have suggested, the issue with computers is not computers but curriculum. A major implication of this study is that wordprocessing can make an important contribution to the writing curriculum in the college of applied arts and technology. But it also invites a substantial change in the writing curriculum and in the roles people play in teaching and learning writing. As well, it is apparent that if a policy of computer literacy is to be put in place, the use of the computer as a writing tool can effect this in a realistic manner.

Adoption cannot be undertaken without preparation, however, and any change should carefully be managed to consider and provide for the development of new curriculum and the retraining of faculty.

OUTLINE OF THE STRUCTURE OF THE BODY OF THE REPORT

The report is designed in two parts. Part One is a summary report; Part Two is a discussion and presentation of background and illustration. The summary report begins with this introduction, Chapter 1, which outlines the purpose, context, method, and conclusions. These matters are then developed in Chapters 2, 3, and 4 in a review of the findings. Chapters 5 to 10 offer detailed information on the literature, methodology, interviews, statistical and anecdotal findings, and the writing of the students.

PART ONE

Introduction
College Students and Their Writing
Wordprocessing in College English and Students' Lives
Implications for Teaching and Administration in the College Setting

PART TWO

Research and Current Literature
Methodology in Detail
Interviews
A Statistical Profile of Students and Their Responses
An Anecdotal Profile of Students and Their Responses
Writing Samples and Student Writing Skills

An annotated bibliography developed as the research progressed is found at the end of the report. The appendix presents the survey, interview questions, and questions used in the study.

CHAPTER 2

COLLEGE STUDENTS AND THEIR WRITING

BACKGROUND

How does wordprocessing influence college students' writing and attitudes? An answer to this question starts well before students even step into a microcomputer laboratory for the first time. It requires that we begin with the experiences, expectations, skills, and preferences which students bring to their postsecondary studies.

Chapter 2 presents a profile of a large number of students who began postsecondary studies in September, 1986. This chapter describes, for example, students' experiences with writing and their understanding of the process. It discusses the attitudes which students express toward writing and the writing competence which they demonstrate as they begin their postsecondary education.

This profile of "College Students and Their Writing" is not simply a backdrop for an investigation of wordprocessing in curriculum. Rather it suggests specific questions and means for assessing the value of this new resource. The findings from these questions and the implications of the answers are presented in Chapters 3 and 4.

The Provincial Context

The profile below is based on a sample of more than 600 students. They were among more than 100,000 full-time students registered in 1986/1987 at Ontario colleges of applied arts and technology. Most of these students come to the "community colleges", as they are informally known, directly from high school. The colleges are not transfer institutions, but offer career-related two-year and three-year programs.

Most diploma programs at the twenty-two colleges include one or more English courses. The curriculum is not provincially specified, and it varies from college to college, program to program, in both length and objectives. However, most colleges offer a communication skills subject in the first semester, generally with an emphasis on writing.

The Research Sample

The research sample was drawn from 3,000 first semester students at the Newnham Campus of Seneca College of Applied Arts and Technology. This campus provides a broad sampling of students in the college system.

The research project studied 649 students registered in 29 first semester classes. All of the students were registered in a 15-week English and Communications course entitled "College English". The curriculum of this course is described in Chapters 3 and 6.

The 649 students (302 female; 347 male) who responded to the September, 1986 survey were registered in programs in Business, Computer Studies, Office Administration, Applied Arts and Technology. The mixture of students from 40 different postsecondary programs is representative of community college students and their areas of study.

The Research Design

Within the first week of classes, the students responded to a questionnaire (reproduced in Appendix A) administered by their English teacher. They also submitted writing samples obtained through the participation of ten English and Communications faculty at Seneca College. The common writing task and directions were adapted from those developed by Pringle and Freedman (see Chapter 5 and Bibliography). The task is reproduced in Appendix C; illustrative writing samples and commentary appear in Chapter 10.

The test run of the study conducted in 1985/1986 had developed a third research element, a means for evoking a "student voice" talking about writing. We therefore interviewed 33 students -- representing 5% of the surveyed population -- during the first two weeks of classes. Chapter 7 documents these interviews, which proved an essential complement to the survey and writing samples.

A PROFILE OF COLLEGE STUDENTS

Students' Backgrounds

Ontario's colleges admit diploma students who have completed Ontario's Grade XII curriculum with credits taken at the "General" level of difficulty. However, many students in the sample had taken English subjects beyond the minimum level required by the college system. While 40% had last studied a Grade XII English at the General level, 17% and 31% had completed Grade XII Advanced and Grade XIII, respectively.

A substantial proportion of students come to the college system speaking English as their second language. In the September sample, 260 students or 40% stated that English was not their native language. Yet more than half of them had studied English beyond the Grade XII General level, and more than half spoke English at home more frequently than their native language. When we look later at student writing and use of wordprocessing, this ESL group -- which is itself quite diverse -- will be compared to the whole sample.

In the mid-1980s, students entering college still had only limited experience with microcomputers. Only 12% considered themselves "Experienced"; another 38% were "Familiar" with microcomputers, primarily through exposure gained in school. As of 1986, fewer than one in every five students came from a family with a personal computer in the home. Within the sample, notably 12% of females and 21% of males report home ownership of a microcomputer.

Nevertheless, most of the students expected that they would soon have to acquire familiarity with wordprocessing and computers. Approximately 60% of both females and males responded YES to the the survey statement, "I will likely have to use a computer to write when I go to work." Such expectations may be relevant to the motivational and attitudinal factors that will emerge in Chapter 3.

Students' Views of Themselves and Their Experiences as Writers

As they prepared for college and work, incoming students described a variety of experiences with writing at school and in their own lives.

For many, the high school experience was immediate and memorable. As the interviews indicate, some students were positive about the experience, showing confidence in themselves and, quite often, gratitude to one special teacher:

> In general my writing was quality stuff. I thought I was taught well. (I) had to write a certain way, to a standard; I thought I kept to their standards.

Others spoke much more critically, objecting in particular to lack of guidance or instruction:

> Not enough emphasis is put on writing style -- it's more just cranking out an essay and looking for facts.
>
> They don't specify what you did wrong. I really didn't learn right from wrong. You were on your own.
>
> I don't think the teachers spent enough time with us. I wasn't taught the right way. It was just 'do this'.

Advice and Help

Such comments are relevant to two survey questions on sources of help. Seventy-four per cent responded that "The best advice I ever got about writing" came from a teacher. Yet responses to another survey question indicated comfort with a variety of sources of help:

When I write, I like to get help from

My family	12%
A friend	32%
A teacher	32%
No one	23%
No answer	1%

Perhaps preferred sources of help can be explained in part by preferred writing environment. Eighty per cent of students said they do their best writing at home; in interviews, many specified that they prefer to write in their own room at night.

Enjoyment of Writing

Roughly half of the students surveyed responded YES to the statement, "I enjoy writing". The enjoyment was often associated with creativity and inspiration:

> I like to write stories. Or I did. I don't mind writing letters. Last night (I wrote) the longest letter of my life -- about eight and a half big pages.
>
> I go through phases -- sometimes I won't write for a long time then I'll get in a mood and write a lot. Last year (my teacher) inspired me to write a lot. Usually I don't write just for something to do.

Self-Assessment

Enjoyment is clearly related to competence. Only 46% of entering students responded YES to "I am confident about my writing". Asked to provide a summary rating on their writing, they responded as follows:

Very Good	3%
Good	22%
Average	61%
Below Average	12%
Well Below Average	2%

The less positive self-assessments were reflected in comments such as the following:

> On a scale of 1 to 10 probably about a five -- average. I do what I'm supposed to do, no more, no less.
>
> (I am) about average. Maybe less than average. Maybe because I'm not writing as much as I should be. I wouldn't be able to write a perfect paper.
>
> Terrible -- I need a lot of help.

Such comments -- as honest and diverse as they are -- not only give substance to the range of confidence levels. They also suggest a further question for discussion of wordprocessing in curriculum. Who profits most: students who feel confident and capable or those who are unsure of their writing skills?

What is Good Writing?

Students highlight a wide range of factors when asked to define good writing. The interviews reveal three main themes -- originality, suitability to the reader, and correctness:

> Combination of style and creativity, fresh ideas when you write.
>
> You have to be imaginative. You have to have the patience to go back over your work.
>
> A person has to have their original style. You have to grab all readers personally. Write with feeling, emotions -- even if it means opening up themselves. Plus the vocabulary has to be good.
>
> The ability to communicate clearly without having to put in a lot of extra. A botany teacher told me: concise is nice.
>
> It's appealing to the reader; it's natural-sounding to the reader if it sounds like someone talking to the reader. Doesn't sound like a dictionary. All fits together in a natural flow instead of jumping around.
>
> Grammar -- totally.

The correlation to confidence levels is obvious from interviews and surveys alike. Confident students more frequently cite originality and sensitivity to reader. Less confident students focus primarily on grammar, punctuation, spelling --

aspects of language that can be assessed in terms of errors and correctness.

The Writing Process

Finally, the profile of students and their concept of writing provides a model of the writing process that many students have internalized. Students claim that they work towards good writing through a painstaking process:

> First I think about what I'm going to say. I do rough notes and put anything that comes into mind. Then do a rough copy and take out the stuff you don't need. If you do it 2 or 3 times, it's better.

An overwhelming 87% state they prefer to do a rough draft first rather than starting with the final copy. Seventy-two per cent say they make minor changes once a draft is completed; 41% state that they make major changes. In short, most students claim to prefer a draft/write/revise sequence which allows for alterations during the revision stage.

COLLEGE PERCEPTIONS OF STUDENTS AND THEIR WRITING

The above profile is drawn, of course, from students' descriptions of themselves and their writing. The research project compared this profile with perceptions from the English faculty, data from a testing and placement system and impressions from the wider college community, including other faculty and advisory committees.

English Faculty Perceptions

Many college teachers dispute the students' profile of themselves. Of the 10 faculty who served on the advisory committee and taught the 29 classes, several remarked that some of the above self-assessments seemed unrealistic.

Faculty noted, for example, that while many students have internalized a model of writing involving planning, drafting and revising, far fewer actually follow this prescription. Others are more like this student who admits disdain for the "rough copy":

> The rough copy. I don't know a boy who did a rough copy in high school. Girls did. The teacher would ask for all copies; boys would write the good copy and then make up a rough one.

Similarly, when reviewing their classes' survey responses, several faculty expressed surprise at the high percentages who consider their writing adequate for the demands of college (74%) and work (76%).

Data from Testing and Placement

Faculty point to student reading levels, writing samples, and program placement as indicators of language skills. The 649 students in the sample were pre-tested in the summer of 1986, along with all other students beginning studies at the Newnham Campus. On the Nelson Denny reading test, the group scored an average grade equivalent of 10.2. Based on this result and on an accompanying writing sample, 262 or 40% of the sample were placed in special classes of "College English" in which additional help and time were available and considered necessary for successful completion of the program.

Impressions from Other Sources

English faculty assessments and data from testing and placement system are not the only indicators of writing difficulties experienced by some students. Negative comments on writing adequacy for college and career come from a substantial percentage of faculty and administrators responsible for other subject areas and from employers and advisory committees. Along with their colleagues in English, they often point to societal changes (e.g. place of reading and writing in the home), second language difficulties and other such factors which affect students' facility with English.

Concerns are expressed not only about the students who struggle and in many cases drop out, but also about students who complete the curriculum, graduate, and find jobs. Those making such comments frequently suggest that while students have acquired knowledge and skills during their college education, their communication skills prove weak and hamper their progress on the job.

A LOOK AT STUDENT WRITING

Clearly, student writing is a significant concern at Ontario community colleges, as it is elsewhere in postsecondary education. To put the issue in perspective, we gathered writing samples from the 29 classes in the study both at the beginning of the semester and at its end.

The writing samples were not designed to yield a statistical measure of writing competence before and after the experience with wordprocessing. The researchers rejected this concept for three reasons that are described in Chapter 3 and amplified in Chapter 10. Instead, the samples are used to characterize student writing and to develop the criteria for evaluating the use of wordprocessing.

On the next page are two examples from the September sample. Sample A was written by a competent, confident but unenthusiastic writer in a Computer Studies program. His competence was indicated by his performance on the college placement test (e.g. Grade XV equivalent reading level), his writing and his overall performance (e.g. an A grade in EAC 150). His confidence was reflected in his survey responses: in both September and December he indicated he was confident in his writing and its adequacy for college and work. Yet this competence and confidence did not give the student much pleasure; on both surveys he indicated that he did not enjoy writing.

Sample B was written by a student who began college with much less competence and confidence. Reading and writing scores on the college placement test indicated she required placement in a section of EAC 150 offering additional help and time. Her survey responses showed a recognition of writing difficulties and a lack of confidence in her writing and its adequacy for college or the career she planned in business.

The two writing samples suggest several questions. What does wordprocessing offer to competent writers? Do competent and weak writers react to wordprocessing in similar ways, or does one group find it more beneficial than the other? Does the time required to learn wordprocessing take weak writers away from traditional instruction and practice that they need? Does wordprocessing help students with particular language difficulties to "see" and resolve those difficulties? Given that wordprocessing laboratories are expensive resources, should their use be restricted to certain types of writers? These questions are addressed in Chapters 3 and 4.

Writing samples not only suggest research questions; they also provide insight into how students approach the writing process and how the curriculum channels their approaches. Earlier in this chapter, we remarked that students express preference for a revision stage but seem to have quite varied conceptualizations of what it involves. The September writing samples, which are discussed in greater detail in Chapter 10, were produced in class, following distribution of topics and instructions in a previous class. Students were encouraged to use notes while writing, and to make changes.

Few did. Crossouts (as represented in the samples) were few and minor. More major changes were almost nonexistent. Does this mean that students really do not want to revise at all, that their stated preference for a revision stage simply feeds back an apparently desired response? It is difficult to say. However, it is much less difficult to conclude that many writing assignments, including the one used here, actually encourage single draft writing and discourage extensive revision.

TWO EXAMPLES OF STUDENT WRITING

These passages are excerpts from writing done in the first week of the first semester. The printed version below uses the line length of the handwritten original. Crossouts indicate changes made by the writers. The printed version reproduces the handwritten version as accurately as possible, including apparent errors that appear below to be typographical.

Sample A

The danger of the past was that people became
slaves. The danger of the future is that people may
become robots.
The computer era is upon us. We, as a nation,
are deeply involved with these machines. People fear
that the world will get so computerized , that we will
not have to do anything to live. All that we will
have to do is push a button, and a robot will
come out and perform whatever task we wish it to.
There is a book entitled Brave New
World which deals with this fear, partially.
In this particular book Man has become so computerized
people do not need to get married or have sexual
intercourse. The computers extract the eggs from the male
and female and make the child with whatever
charachteristics are chosen....
Even cartoons show mans fear of computers running
the lifes of humans. In "The Transformers", all this cartoon
deals with is the fight between two "races" of robots....

* * * * *

Sample B

"The danger in the past was that
people became slaves. The danger of the
future is that people may become robots."
Why is that?

It is because man in the earlier
days conqued his journey ~~in~~ across the seas,
his adventure to explore the ~~on~~ unknown,
was his goal. He wanted to ~~all~~ achieve all that he
should and when ~~y~~ he thought he did
he turned upon his own kind. Those
who were thought of as being the better
race had more power and those of
a different race, and became their slaves.

These questions and possibilities, raised by student writing and by composition assignments, relate closely to a major theme in composition research. Whereas accomplished writers revise extensively and at various stages in the writing process, students tend to proofread in progress. The challenge to the curriculum, then, is to devise tools that encourage a real conceptualization and real practice of revision. A measure of the value of wordprocessing, then, is its role in contributing to this objective.

SUMMARY

Quite clearly, a profile of 649 community college students does not produce a portrait of a single, "typical" student writer. Student experiences, expectations, skills, interests, and attitudes are diverse. They are also most relevant to an evaluation of a new resource in the curriculum and in students' academic life and career preparation. Accordingly, these factors underlie the research design and the findings and implications reported in Chapters 3 and 4.

CHAPTER 3

WORDPROCESSING IN COLLEGE ENGLISH AND IN STUDENTS' LIVES

CONTEXTS FOR EVALUATION

As the title of this chapter suggests , the value of wordprocessing in postsecondary education should be assessed in two contexts. The first is the writing course in which wordprocessing is taught. The second is the broader context introduced in Chapter 2: students' backgrounds, expectations, academic work, career preparation, and other activities beyond that single course.

The first context, the College English course which introduced and used wordprocessing, raised seven questions to be addressed in the research:

1. How much instructional time and practice do students need to become proficient and independent users of wordprocessing?
2. How many hours do students use the laboratory resources during the semester to do their assignments?
3. Is the learning process difficult?
4. What factors (e.g. writing skill, typing skill, experience with computers) make the experience with wordprocessing either more or less difficult and valuable?
5. How does the use of wordprocessing affect the curriculum and the role of students and teachers?
6. How does the use of wordprocessing affect students' attitudes to the curriculum and their approach to writing?
7. Do teachers perceive and can research identify writing improvement attributable to the use of wordprocessing during the semester?

The broader context -- of students' background, postsecondary education, and career plans -- raised three additional questions:

8. For what purposes do students use wordprocessing beyond those required by their course?
9. What uses and value do they anticipate relevant to their postsecondary education and career preparation?
10. Does wordprocessing become a long-term resource for students or is it a tool used temporarily then discarded?

The research was designed to address these ten questions, relating them specifically to the COLLEGE ENGLISH CURRICULUM, which is described below. This chapter first introduces that curriculum and then presents the research results in seven sections:

PERCEIVED VALUE OF WORD PROCESSING
ASSIGNED AND VOLUNTARY USES OF WORD PROCESSING
DIFFICULTY LEARNING WORD PROCESSING
THE CLASS, THE LABORATORY AND THE LEARNING PROCESS
NEGATIVE ASPECTS OF INCORPORATING WORD PROCESSING
MEASURING IMPROVEMENT
RETENTION AND EXTENSION OF SKILLS

THE COLLEGE ENGLISH CURRICULUM

As indicated in Chapter 2, students in the research sample were all registered in the first year of diploma programs at Seneca College of Applied Arts and Technology. Six hundred and forty-nine entering students participated in the September, 1986 survey. Four hundred and six completed the end-of-semester survey and writing sample in December. The decrease in sample size is accounted for by class transfers, attrition, and absences when the end-of-semester surveys and writing samples were administered.

From September to December, the students were registered in College English, a first semester course involving (1) Reading and comprehension of selections from various sources (a minimum of 200 pages); (2) Summarizing, analysing, and responding to reading material (a minimum of 2500 words of written assignments); and (3) Learning the wordprocessing program WordStar (a minimum of four hours of instruction in the computer laboratory).

The curriculum specifies and the faculty assured the maximum possible integration of these three curriculum components. For instance, the 29 classes in the study used wordprocessing for most or all of their writing assignments. Thus the research is based on a curriculum in which wordprocessing was not introduced as an isolated technical skill; it instead became the standard means for writing and submitting assignments during the fifteen week semester.

The curriculum specifies use of WordStar, which for several years had been the college's standard wordprocessing software for both administrative use and teaching purposes. This research was not designed to compare WordStar to its major competitors; such a comparison had lower priority than a large-scale investigation of how students respond to any one of the wordprocessing programs that are widely used in curriculum and the workplace.

The College English curriculum also specifies a minimum of four scheduled instructional hours in the microcomputer laboratory. The four hours were not the product of curriculum design; competing demands on the microcomputer facility prevented a significantly greater number of hours. However, students were able to complement the four scheduled hours by using an open, non-scheduled area where microcomputers were available from 8:00 a.m. to 6:00 p.m. on a first-come first-served basis. Further detail on the laboratory resources appears in Chapter 6.

The microcomputer area featured a classroom of recently purchased MS-DOS machines plus another classroom of an older technology, CP/M-based machines in their last year of use at the college. Identical machines were available in the open area for unscheduled use by individual students. The equipment combination is important to note since some students' frustrations with microcomputers (see comments, Chapter 9) were associated with machines that had reached the end of their life span.

The December survey indicated that students used wordprocessing for far more than the minimum of four class hours. Question 10 on the survey asked students to estimate the total number of hours during which they used wordprocessing from September to December. The responses were (a) less than 10 hours, 34%; (b) 11-20 hours, 33%; (c) 21-30 hours, 18%; (d) more than 30 hours, 13%; no answer, 2%.

PERCEIVED VALUE OF WORDPROCESSING

As students completed their semester, the December survey asked them to describe and evaluate their in-class and out-of-class introduction to wordprocessing.

With respect to career preparation, responses were overwhelmingly positive. Thirty-five per cent felt that the time spent was "very worthwhile"; 55% considered it "worthwhile". In other words, 90% of students perceived that an introduction to wordprocessing was an asset for career preparation.

Similarly, 86% of the students felt that wordprocessing had a positive effect on their development as writers; 28% rating it "very worthwhile"; 58% found it "worthwhile". Such responses seem to support inclusion of wordprocessing in a writing curriculum rather than introduction as an isolated skill.

By checking responses on a rating scale of 1 (not useful) to 5 (very useful), students also recorded their perceptions of the value of wordprocessing for various aspects of the writing process:

21. For college students, wordprocessing is valuable for:

	not useful 1	2	3	4	very useful 5	NO ANS
(a) planning and getting started	12%	19	29	24	13	3
(b) improving spelling	9	15	21	34	20	1
(c) reducing the number of errors	4	6	15	34	39	2
(d) organizing more effectively	3	9	21	38	27	2
(e) editing (revising) more easily	2	2	8	30	56	2
(f) producing neat, attractive work	1	2	5	23	67	2
(g) generally improving writing	5	9	32	34	16	4
(h) increasing enjoyment of writing	8	14	27	30	17	4
(i) increasing confidence in writing	6	11	30	33	17	3

As might be predicted, students rate wordprocessing as very valuable for "producing neat, attractive work". Some observers suggest this is an insignificant value, yielding superficial improvements that mask more important shortcomings. Most students seem to disagree, as the following two comments so decisively indicate:

> I don't think wordprocessing has affected my writing habits but when I do write on it I feel more confident about my work which I feel has a lot to do with the appearance of the finished product.
>
> I always like to use the wordprocessor because it's hard to read my writing. A wordprocessor makes all writers equal like a Colt 45 made all men equal during the settlement of the west.

The Colt 45 analogy is unique but the sentiment is often expressed. Many students remark that a neat, attractive presentation of their work creates enthusiasm for the process and pride in the result.

Students express similar enthusiasm about the value of wordprocessing for "editing (revising) more easily". On the 1 to 5 rating scale, 86% circled 4 or 5. Comments suggested that increased ease in the editing process translates into increased willingness to revise:

> It has enabled me to make good use of my time in correcting errors and sentence structure rather than waste hours of rewriting in good copy.

Both comments and checkmark responses indicate that most students consider wordprocessing a useful tool for spelling improvement (see 21 (b) above) and error reduction (see 21 (c) above). They cite the usefulness of spelling checkers (introduced in the curriculum) plus the ease of correction associated above with revision. In addition, several students remark that wordprocessing helps them "see" aspects of their writing that had previously been easy to miss:

> Grammar and spelling mistakes are more easily noted when working on a computer. There seems to be less omissions of words and carelessness. I feel my writing has improved through the use of a wordprocessor. It's faster and neater.

Although students most frequently cite effect on error reduction, spelling, and revision, they also see value in wordprocessing for "organizing more effectively" (see 21 (d)). On the 1 to 5 scale, 65% rated value for organizing as 4 or 5; another 21% circled 3.

Responses concerning "planning and getting started" were somewhat less enthusiastic. The 1 to 5 scale produced almost a perfect bell curve of answers (see 21 (a) above). Students rarely mentioned planning and getting started. In fact, among the three class sets of December comments printed in Chapter 9, only one concerns this aspect of the writing process:

> I feel that it didn't help me much because I still can't sit at a computer and just start to write.

The last three portions of question 21 addressed generally improving writing, increasing enjoyment of writing, and increasing confidence in writing. Responses, as shown above, were positive and similar. The comments in Chapter 9 frequently mention enjoyment and confidence, often linking them to the aspects of the writing process addressed above.

At the same time, it is important to note that a minority of students expressed frustration, often in strong terms. The survey asked students to compare wordprocessing with pen and paper composition. Checkmark responses indicated a group who felt frustrated and saw little value in the new tool:

15. Composing on a microcomputer is:

(a) enjoyable	48%
(b) about the same as writing	35
(c) frustrating	16
no answer	1

Comments focused on two sources of frustration -- problems with equipment and facilities and the time required of poor typists:

> As far as WordStar is concerned it only made me frustrated. I could write an eight page essay in half the time than if I used one of the school's so-called computers. Either they never worked or else it was impossible to get respectable amounts of time on it.
>
> By having to use a computer, a 300 word essay begins to feel like I'm writing a novel as it takes forever to complete assignments as I'm a terrible typer. I enjoy writing my thoughts on paper not a machine, but I do understand that I must know how to use it, and that it will likely be to my benefit in the future.

These frustrations are discussed further in the section below entitled DIFFICULTIES LEARNING WORD PROCESSING.

ASSIGNED AND VOLUNTARY USES OF WORD PROCESSING

Students' perceptions of wordprocessing provide one perspective on its value to them. A second perspective comes from data on the use of wordprocessing for purposes beyond those specified by the curriculum. As described above, the College English curriculum required students in the sample to use wordprocessing for English assignments. Other uses were entirely voluntary, and were possible given the access students had to the open laboratory.

Question 1 on the December survey asked students to indicate their assigned and voluntary usage during the fall semester:

1. This semester I have used wordprocessing for:

(a) assignments in English	94%
(b) assignments in subjects other than English	35%
(c) personal writing	24%
(d) fun	20%

Such responses indicate that, during the first semester's learning process, a third of the students were already adopting wordprocessing for academic purposes beyond those required of them. In addition, some students decided to write letters or other personal documents using the microcomputer.

Was this a temporary infatuation with a new toy? Or did students adopt the tool for their own purposes once it was no longer new to them? These key questions are addressed below in the section entitled RETENTION AND EXTENSION OF SKILLS.

DIFFICULTY LEARNING WORDPROCESSING

As the questions at the beginning of this chapter indicated, learning time and learning difficulty are important factors in an evaluation of wordprocessing in postsecondary curriculum. The end-of-semester survey indicated that, for most students, the learning process was not onerous.

Question 13 on the December survey asked for a summary comment on the degree of difficulty. The 406 students in the December sample responded as follows:

13. Learning to use a microcomputer for writing is:

Very Easy	22%
Easy	65%
Difficult	11%
Very Difficult	1%
No Answer	1%

Computer Studies students all rated the task Very Easy (47%) or Easy (53%). Applied Arts students considered the task more challenging, with 21% rating it difficult. For further statistical comparisons by gender, academic division, and native language, see Chapter 6, "A Statistical Profile of Students and Their Responses".

The December survey also asked students to estimate the time required to learn to use wordprocessing for composition purposes:

11. To learn to use wordprocessing fairly independently takes, in instruction and practice:

(a) less than 10 hours	74%
(b) 11-20 hours	19%
(c) 21-30 hours	4%
(d) more than 30 hours	2%
no answer	1%

Once again, Computer Studies students showed the greatest enthusiasm, reporting the highest voluntary use of wordprocessing.

The survey also sought additional perspective on ease of learning via a six-part question on what students need in order to learn and use wordprocessing effectively. The question was preceded by a general instruction, "BASED ON YOUR EXPERIENCE AND ON OBSERVATION OF OTHER STUDENTS, INDICATE YOUR CONCLUSIONS CONCERNING THE FOLLOWING STATEMENTS."

20. To use wordprocessing effectively, students need:

	1	2	3	4	5	NO ANS
(a) good typing skills	5%	21	13	46	15	0
(b) good ability with technical processes	9	34	23	30	4	0
(c) an interest in writing	6	23	20	40	11	0
(d) good writing skills	5	30	21	35	9	0
(e) instruction or practice weekly	6	23	20	35	12	4
(f) regular access to people with expertise in word processing.	8	21	22	34	13	2

1 = strongly disagree
2 = disagree
3 = no opinion
4 = agree
5 = strongly agree

These results are difficult to interpret. The range of responses is wide and a substantial percentage of students express "no opinion" on all of the statements. Written comments supporting strong opinions on the statements were not common; faculty opinions were as varied as the student opinions with, for example, typing skills seeming indispensable to some and irrelevant to others.

Considering all of the above evidence and factors, the research concludes that no one of the six factors above is indispensable to the effective learning and use of wordprocessing in the context of a composition course.

THE CLASS, THE LABORATORY, AND THE LEARNING PROCESS

The above perspectives on wordprocessing in postsecondary education deal almost entirely with implications for the individual student. Previously, Chapter 2 presented some data on students' preferences for place of work, source of help and desire for collaboration. Such preferences lead to consideration of wordprocessing not simply as a resource for individual students but also as a medium that affects the class, its interactions, and the learning/writing process.

Students remark that wordprocessing encourages interaction over both technical problems and writing questions:

17. When students write with a wordprocessor, they help each other:

(a)	more than they do in a regular writing class	62%
(b)	as often as they do in a regular writing class	34
(c)	less than they do in a regular writing class	12
	no answer	2

The teachers involved in the study noted this change and suggested that three factors encouraged such collaboration. The technical challenge invited interaction between novices and more accomplished users. The public nature of the text on the screen made observation and comment both easier and more acceptable. Finally, greater revision capability meant that suggestions could be acted upon rather than being treated as gratuitous, after-the-fact advice.

Such changes seem particularly significant to teachers whose curriculum is oriented towards process and collaboration. The implications of such changes will be discussed further in Chapter 4.

NEGATIVE ASPECTS OF INCORPORATING WORD PROCESSING

The summary above indicates considerable enthusiasm for wordprocessing in composition curriculum, expressed by both faculty and students. On the other hand, the research identified negative aspects to its introduction. These will be stated only briefly here. Nevertheless, they are significant issues, and will be addressed further in the discussion of IMPLICATIONS in Chapter 4.

Logistical and Equipment Problems

Teachers using chalk and blackboard can experience a materials problem: no chalk. Teachers using an overhead projector can experience an equipment failure: a burnt-out bulb. Teachers using a microcomputer laboratory -- especially on a rotation that grants them very few hours -- can experience problems that make them yearn for chalk and blackboard.

While reviewing difficulties experienced by their classes, faculty noted difficulties such as inappropriate booking time in microcomputer lab; double booking and competition for a scarce resource; too many students for available, working machines; disk drive and other equipment failures; software problems; and disk problems. Such problems are likely when a central resource serves a large number of students and when volume puts extreme demands on space, equipment, software, and staff. However, the conclusion drawn by some faculty and students is that the technology complicates their lives rather than making work easier.

Philosophical Problems

Philosophical problems with wordprocessing in composition curriculum are not so much a finding of this research; more accurately, they are a context. The ten faculty involved in the study were volunteers and were enthusiastic about or at least interested in this curriculum innovation. Some of their colleagues were much less enthusiastic and raised not just logistical but philosophical problems.

These are important issues, but this chapter will simply note their existence along with the findings presented here. A more detailed description of these problems appears in Chapter 4 which investigates **IMPLICATIONS** of the research.

MEASURING IMPROVEMENT IN WRITING

To address complex and sometimes contradictory perceptions of student writing, the research project gathered writing samples from students in the 29 classes participating in the study in September. Similar samples were gathered in December. Faculty agreed to the two writing topics, the instructions, and the circumstances for writing. Students were given the topics and instructions at a class during the first week. They had the time until the next class to prepare and, if they wished, to make rough notes to be used when producing this assignment on the wordprocessor in the next class time. The methodology is described in greater detail in Chapter 6.

The writing samples were not designed to yield a statistical measure of writing competence before and after the experience with wordprocessing. The researchers rejected this concept for three reasons. First, it would be foolhardy to "measure" the impact of a new resource after its use for the extremely short time described above (4 class hours plus quite varied individual usage). Any statistical measure must be based on much more significant time and usage. Second, as the extensive literature on testing and measurement suggests, it is very difficult to devise a single yardstick that takes into account both the countable surface features and the underlying text design and organization. Third, the research intended to study the attitudes and adoption of wordprocessing among a large population rather than to examine in detail writing from a more restricted sample matched against a control group.

Chapter 10 describes the end-of-semester writing sample in some detail. It notes that the December sample elicited better writing than the September sample, but cautions that this cannot be attributed entirely -- or even primarily -- to the use of wordprocessing. Other significant factors were complexity of the writing tasks, student improvement attributed to the composition curriculum, greater familiarity with the task in December and improvement due simply to the practice that students had throughout the fall term.

Some research on writing has focused on length of composition. Put simply, better student writers tend to write more in response to the same task. They tend to see the task's complexity, explore more aspects of it and offer more detail in their response. However, this yardstick seemed to offer little basis for comparison in this study. Students did not write significantly more in December. On the other hand, they did not write less, a point that is worth noting given that typing skills are a factor when completing a time-restricted assignment.

In summary, for the reasons stated above, this research offers no statistical evidence of specific improvements in, for example, error reduction attributable entirely to wordprocessing. It offers no such evidence not because of a lack of interest, but because of serious reservations about whether meaningful and reliable measurements can be taken within the context described in the first three chapters. The research findings concentrate instead on aspects of writing that can be appropriately addressed: students' attitudes, handling of the writing process and adoption of a writing tool for real purposes.

BEYOND THE FIRST SEMESTER

As indicated at the beginning of the chapter, the research required a longer term perspective, beyond the bounds of the first fifteen weeks. To gain this perspective, the research sought students' reactions three months later, once the first semester's expectations were well past.

The method was a mail-out survey, sent to those of the 406 students who remained registered and active in the second semester. Of a possible 358 respondents, 53 or 14.8% returned the follow-up survey.

Their responses were extremely positive, as is indicated by the statistical profile in Chapter 8 and the reprinting of all of their comments in Chapter 9. For example, they responded even more positively than the December sample to questions on the value of wordprocessing for their development as writers.

As might be expected, by the second semester, students were using wordprocessing for slightly different purposes than were reported in December. Fifty-one per cent (a decline from 93%) were still using it for English assignments. (Some students had no opportunity to continue this application, since their program did not include a second semester English.) Two other applications increased dramatically: assignments in subjects other than English from 35% to 51%; personal writing from 24% to 47%.

It is interesting to compare this reported usage in March, 1987 with the December sample's plans for the second semester:

2. Next semester I expect to use wordprocessing for:

(a)	most of my assignments in English	59%
(b)	major assignments in English	60%
(c)	assignments in subjects other than English	62%
(d)	personal writing	32%
(e)	fun	20%

The extremely positive result from the March sample of 53 students invites question of the sample's validity. Were the respondents typical of the larger sample, or did the March survey attract enthusiasts but draw no response from students who had experienced frustration?

To check this, we compared the December whole sample and the December responses from the March sample. The comparison is printed in Chapter 8, **A STATISTICAL PROFILE OF STUDENTS AND THEIR RESPONSES**, on the December summary sheets.

The comparison indicates that a higher percentage of the March respondents found it easy to learn wordprocessing. Similarly, a slightly higher percentage of the follow-up group expressed confidence in their writing. On many other questions, their responses were very similar to those of the whole December sample.

In short, with the above cautions in mind, we can conclude that the mail-out survey elicited a sample that is well worth studying. Their strongly positive comments seem to indicate, then, that for many students the value and usage experienced in the first semester carried on beyond the College English context.

SUMMARY

To summarize, the research found that students learned to use wordprocessing quite easily during their first semester composition course. Most students felt the effort was worthwhile, both for particular writing tasks and for their long-term development and career preparation. Most students intended to use wordprocessing voluntarily once the first semester was over; many carried through with this intention.

Student reactions to wordprocessing were not uniform; rather they reflected the diversity of student experiences, interests and goals. The diversity of reactions is noted in Chapter 3 and recorded in greater detail in Chapters 8 and 9. Nevertheless, the research concludes that wordprocessing in composition curriculum was beneficial to all of the student groups represented among the 29 classes in this study.

CHAPTER 4

IMPLICATIONS

Chapters 2 and 3 presented findings that have implications for faculty, departments, and institutions considering use of wordprocessing in curriculum. Chapter 4 presents these implications in five sections.

CURRICULUM
STUDENTS
FACULTY
RESOURCES
STUDENT, TEACHER, AND COMPUTER ROLES
  IN THE WRITING PROCESS

The first four focus on the four elements in the writing curriculum. The fifth looks at how a new technology may affect the interaction of student, teacher, and text.

CURRICULUM

Introducing Microcomputers and Word Processing

In recent years, colleges and other institutions have revised curriculum to introduce microcomputers in various ways. Some have created separate "Introduction to Computers" or "Computer Literacy" courses for students in various program areas. Such courses normally introduce wordprocessing, spreadsheet software, and data base management programs. Other colleges have preferred to incorporate microcomputer applications -- in accounting, English, records management, office practices -- into existing courses with previously defined objectives.

This research concludes that the first semester "College English" program is a logical and desirable context for an introduction to wordprocessing. The task proves manageable, even with varied student backgrounds, considerable faculty training needs and demands on resources, which will be discussed below. The results, as reported in Chapter 3, prove worthwhile. Finally, benefits appear to be reciprocal. Use of a new resource boosts students' involvement in a composition curriculum whose objectives they have previously encountered. In turn, the composition curriculum gives a real use for the newly introduced tool rather than allowing its relegation to use in artificial exercises.

Curriculum Design

There is no single method for redesigning the composition course to involve wordprocessing. The ten faculty in this study used and adapted diverse teaching techniques that they had developed before the advent of wordprocessing in curriculum. No one approach emerged as the "right" way. However, several principles emerged.

First, the rationale should be specified in terms of writing objectives rather than technical skills. Students in the study opened and saved files, input, revised, and printed text, and used related software such as spelling checkers. However, their teachers did not present course objectives or measurements of success in these terms. Similarly, students did not comment on learning in terms of specific technical skills. Rather they perceived and evaluated wordprocessing in relation to the writing process and to the tasks of organizing, "seeing" anew, and revising the text.

Second, the curriculum under study worked most effectively when students were introduced to wordprocessing early in the semester and then used it throughout the term. Late introduction and little practice time created a much less satisfactory experience. This point has implications, quite clearly, both for curriculum design and for resource management.

Third, the curriculum relied upon a combination of class time and independent work time. The class time in the laboratory not only taught technical skills: it also focused student attention on the act of writing by encouraging drafting, experimentation, and revision. The independent practice time required students to become self-sufficient users of wordprocessing for composition purposes. The research confirmed that the combination of these components permits achievement of the curriculum objectives.

Time Available

Both faculty and students commented on the time available for learning and using wordprocessing. Some felt the four class hours plus independent practice was adequate. Others felt that the original curriculum design (see Chapter 3) of scheduled weekly sessions in the laboratory would have increased satisfaction and learning. In the discussion over what is adequate and what is desirable, no one suggested that the class time scheduled in the laboratory was too great. The implication is that the curriculum studied here requires at least the scheduled and unscheduled time described above.

Curriculum Follow-up

At the semester's end, most students were planning to use wordprocessing for English and other assignments during their second semester and second year studies. The March, 1987 survey indicated that they did so, at least during the second semester. Both intention and reality invite consideration of curriculum implications for subsequent semesters. A revised curriculum could, for example, require students to use wordprocessing to produce reports in advanced English and/or other subjects. If such a requirement were introduced, it would apply and reinforce the first semester's teaching. It would, however, have implications for the scheduling and use of microcomputer facilities, as will be discussed under RESOURCES below.

Even without required applications in subsequent semesters, later semesters provide an excellent context for assessing the long-term effect of wordprocessing on curriculum and on students' writing. It would be extremely useful, for example, to profile students' voluntary use of wordprocessing when they reach advanced technical or business writing subjects. What percentage of students voluntarily use wordprocessing for assignments? Which students do so? Why do they use it? Does it affect the calibre of their work or the process by which they work? Such follow-up questions could be addressed through modification of the surveys in Chapter 10.

STUDENTS

Returning to the first-year emphasis of the research project, we can identify several implications from the research data on students as they begin and complete their first semester of postsecondary education. Chapter 2 presented various profiles of incoming students. Chapter 3 investigated which of these had relevance to student use of and success with wordprocessing. The implications from these profiles are relevant not only to the success of individual students but also, ultimately, to broad questions of curriculum design.

Four variations among the student population require attention: typing skill, program affiliation, writing competence, and language background.

Typing Skill

Students' typing skills vary considerably, and many students see keyboarding skill as a factor in their success with wordprocessing. Faculty involved in the study discussed this factor at length. Their comments agreed with the research findings. Greater facility with the keyboard is indeed an asset. Yet facility need not be a requirement for participation in a composition course involving wordprocessing.

The research suggests that institutions would do well to complement existing curriculum with keyboarding courses both before and during the first semester. Such courses would help students not only with their first semester curriculum. Since most students expect to use computers during their academic careers and at work, facility with keyboarding would be a well recognized asset well beyond the first semester's demands.

Program Affiliation

The research identified some differences in how particular students learn and use wordprocessing. For example, as Chapter 3 presents and Chapter 6 documents, Computer Studies students express little difficulty during the first semester. Similarly, they use wordprocessing frequently and for various purposes in the second semester. Such a finding is expected, of course. Yet more important than this finding is the question of whether wordprocessing should be used in composition curriculum only with students who express this degree of ease and usage.

The research indicates that this restriction is not appropriate. As the profiles in Chapter 8 indicate, students in other program areas may have less experience and facility with computers. Nevertheless, a large majority of students with every program affiliation indicate that wordprocessing will be relevant to their careers and is already relevant to their development as writers. Thus the statistical differences among the groups seems less significant than the shared perception of a value to wordprocessing for their varied programs and career aspirations.

Writing Competence

Similarly, in Chapter 10, the research documents significant differences in the writing skills that students bring to postsecondary education and demonstrate in the first semester. The research sample included students who could demonstrate in September at least some of the writing skills that the first semester curriculum is designed to develop. It also includes students who, for various reasons, were unlikely to reach that curriculum's objectives within their first semester. Class C, whose comments are documented in Chapter 7, consisted of one such student group.

The comments, survey results, writing samples, and faculty observations all indicated, however, that restrictions based on writing competence were inappropriate. Faculty noted that students with writing difficulties frequently learned wordprocessing quickly and, in many cases, spent considerable time using wordprocessing to write assignments which they could take pride in. This observation, which again has implications for curriculum design, has been substantiated by other research, particularly on the use of wordprocessing with the learning disabled (see Chapter 5 and Annotated Bibliography).

Rather than suggesting differentiation by competence, this research suggests that educators focus on attitude to and confidence in writing. Recent studies (see Chapter 5) have emphasized that writing improvement and attitude to writing are closely bound together. Not surprisingly, students who find the writing process frustrating and the product of their labours unsatisfying tend to shy away from the remedies which teachers prescribe. Like everyone else, they avoid activities that involve painful associations, memories, and results.

The interviews, surveys, and student comments all confirmed that the affective element of writing is extremely important to college students. They suggest that assessment of wordprocessing in curriculum should give great weight to attitude, confidence, and willingness to work on a complex competence that is, for student and professional alike, bound up with self-image.

Language Background

Finally, the research documents, through survey responses and writing samples, the population who come to postsecondary education with English as their second language. As Chapters 3 and 8 indicate, ESL students react to wordprocessing in curriculum in much the same way as native speakers of English. While they have somewhat different learning needs, they see substantially the same value for wordprocessing in their curriculum, writing, and career plans. In short, the research suggests no reason for either targeting or avoiding an ESL student group when designing a composition curriculum featuring the use of wordprocessing.

FACULTY

Just as we can ask which students should participate in a composition curriculum involving wordprocessing, so we can ask which faculty characteristics lead to success or failure. While this question was not formally part of the research, it naturally becomes a major consideration in any department and institution considering such a curriculum change.

First, four faculty concerns must be noted. Some faculty feel that since wordprocessing requires learning of technical skills, its placement in composition curriculum detracts from the curriculum's focus and reduces the time available to teach writing skills. Second, faculty often express concern that wordprocessing creates superficial improvements, that a text which looks clean may contain shortcomings that are disguised by an improved appearance. Third, faculty schooled in literature, arts, and the humanities may feel unqualified to teach wordprocessing and may feel that acquisition of such skill is an unreasonable expectation of them. Similarly, those dedicated to the general education and humanist objectives in a language and literature curriculum may resist a change that shifts the balance towards a technological preoccupation.

Some of the faculty involved in the study expressed these concerns, as do their colleagues. Nevertheless, they chose to be involved in the study because they saw its pursuit and the curriculum's innovations as deserving, even requiring, exploration.

The ten faculty did not share a uniform level of expertise, enthusiasm for computers or zeal concerning their value in curriculum. Nor did they share a single approach to writing. Some were strongly committed to a process model of writing and required students to write far beyond the course requirements. Those with strong literature backgrounds had developed a curriculum anchored by the course's emphasis on reading, researching, and responding to literature.

These differences are noteworthy, as were the differences among student backgrounds. They suggest that just as there is no single method for introducing wordprocessing into curriculum, there is no single profile of the faculty member who will achieve success with wordprocessing in curriculum. The common denominator seems instead to be an interest in exploring the value of a new tool for student writers and for a curriculum that the faculty member considers both sensible and exciting.

RESOURCES

The "new tool" described in Chapter 3 actually consists of several resources: microcomputers in a classroom configuration; microcomputers in an open-access area; printers in both the class/lab and open laboratory; full-featured wordprocessing software; and supportive software including a spelling checker.

The research indicated several conclusions with implications for the design of resources and for the delivery of curriculum.

The Laboratory

First, machine failures were a major source of frustration and complaint, especially among students using older equipment that required greater maintenance. The reaction suggests that a classroom configuration of microcomputers should include at least 10% more machines than the maximum anticipated class size. Otherwise, disk drive failures and other problems are likely to hamper the effective use of the limited time available. This point assumes, of course, a design with a microcomputer for every student. The research suggests that this is important if students are to gain the confidence and independence that the curriculum expects of them.

Second, as cited above, the machines available for drop-in use will likely be used beyond the curriculum's requirements. This point is crucial for resource design. It indicates that resource usage should not be planned strictly to support current-semester applications. If independent and follow-up uses are seen as valid elements of the broader curriculum, the microcomputer laboratory will have to support various and possibly increasing uses throughout the student's career. As the second semester research documents, such usage is real, not hypothetical.

The design of both the classroom/laboratory and the open laboratory should take into account the collaboration which microcomputers encourage and facilitate. Chapter 3 indicated that students and teachers notice the degree of collaboration among students learning wordprocessing. The collaboration extends beyond technical matters to discussion of writing. If the curriculum encourages such collaboration (as much recent research suggests it should), laboratory resources need to be designed accordingly.

The choice of equipment depends in part on the software and applications planned for it. A few years ago, software did not require great speed or memory. Technically speaking, 8-bit, CP/M machines with 64K internal memory were considered adequate for a wordprocessing curriculum, and were effectively used in the curriculum described here. Today, the software possibilities described below and the standards and applications in the workplace demand more of the computer in the classroom. Sixteen-bit XT-compatible machines with 640K internal memory, preferably with a hard disk, appear to be the minimum sensible configuration for a curriculum that may wish to take advantage of an on-line spelling checker, an on-line thesaurus, software to combine text and graphics, data base management software, etc.

Printers

In microcomputer laboratories, printer usage is high, prompting the question of whether printing resources should be extended or student use somehow restricted. The research suggests the first solution for several reasons. First, because of scheduled classes, part-time jobs, travel time, and other factors, students often have to complement laboratory work with at-home work. Second, especially during the first semester, many students express a preference for working at home and for a revision stage involving pen and paper. Third, as implied above, extensive use of the microcomputer laboratory taxes resources heavily. In short, the curriculum, student preferences, and resource limitations all suggest that institutions should do what they can to eliminate printing bottlenecks and thereby to facilitate various stages in the composition process.

Software

Chapter 3 indicated that the research did not attempt to compare different software packages. Hence this chapter cannot comment on the implications of the choice of WordStar 3.3 for use in the composition curriculum. Some students criticized the choice, referring to more recent versions of the software or to other leading choices that their experience indicated would be preferable.

Such criticisms are inevitable no matter what software is chosen. Nevertheless, it is important to confirm that, since the curriculum prepares students for senior subjects involving lengthier documents and, ultimately, for employment, it seems preferable to use fully configured, widely used software rather than software designed with limited capability and complexity strictly for educational purposes.

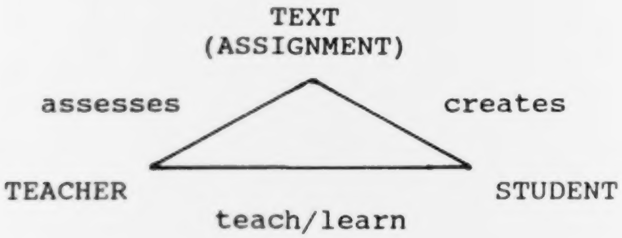
As the research indicated, many students find a spelling checker to be a valuable resource. Recent versions of wordprocessing software have made spelling checkers easier to use than they were a few years ago. We can therefore anticipate that this resource will become even more attractive to students.

At the time of the research, students did not have access to an on-line thesaurus and other resources now available, for example, in WordStar 4.0. Similarly, at that time the dramatic growth of desktop publishing software, which certainly has relevance to a composition curriculum, was only just beginning. These new developments also suggest that the resources used in the study are now outdated, and new purchasers will no doubt want to consider carefully additional software and hardware requirements relevant to various curriculum objectives.

STUDENT, TEACHER, AND COMPUTER ROLES IN THE WRITING PROCESS

The four sections above treat CURRICULUM, STUDENTS, FACULTY, and RESOURCES as four pieces in a puzzle. In this fifth and last look at implications from the research, we turn to the roles that people and machines may play in the classroom and laboratory. We speculate about the message that a new medium may bring to the writing process and to students and teachers labouring over it.

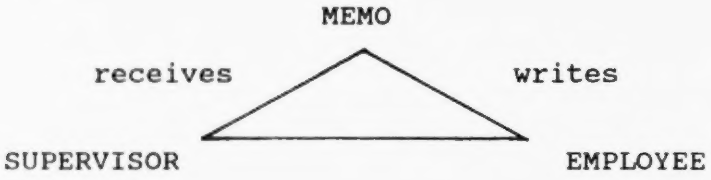
The familiar communications triangle gives us a means for discussing various interactions over text. The triangle can be formulated as follows:



Teachers and students interact either orally and directly (in a "teaching/learning process") or in writing, through the texts that students create and teachers assess. Interactions over these texts or assignments are not usually considered playful or enjoyable. The student tries to create a valuable product (i.e. an assignment that will earn a high grade); the teacher marks the product, a task which is widely felt to be onerous and wearying.

An Overlay

In creating curriculum that relates to students' career aspirations, teachers often ask for texts which require role adoption from outside the world of the classroom. In the community college, the roles are typically derived from the world of business. An illustration appears below.

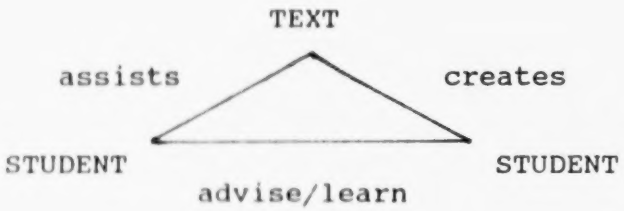


For example, a supervisor in ACME Electronics (actually the teacher) is to receive a memo (an assignment) from an employee (the student) and act on it (mark it). The roles have their merits, but no one really forgets that the teacher/assignment/student triangle underlies it all. One very major reminder of the classroom context is the text's appearance -- usually handwritten on lined paper.

WP and the Triangle

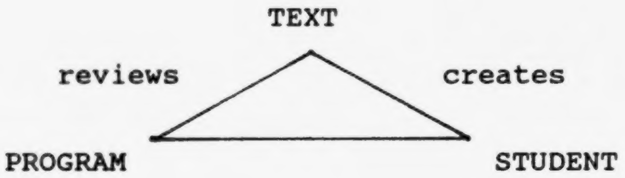
How does wordprocessing come into this? The research findings suggest several ways.

First, in the process of grappling with a new and initially challenging technology, students consult more with other students about the process of text creation. A new element in the triangle appears:



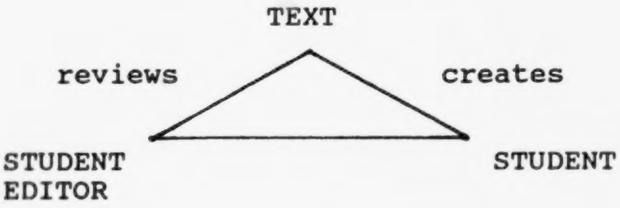
The technology, the laboratory situation and the screen's public "display" of text all encourage this. So does the fact that some students rapidly gain expertise in wordprocessing and can thus offer expertise to others.

Next, a student may consult an ancillary program, such as a spelling checker, which serves as another teacher substitute.



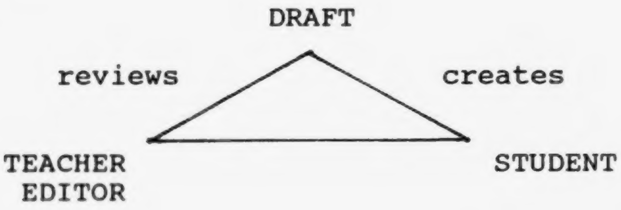
This has obvious implications for the larger curriculum, which must teach students to write when teachers are not there to assess and help.

Third, a student may develop more of an editor persona. She may, as some student comments indicate, "see" the text better. She may reflect on or play with the process of composition and revision, and thereby become more aware of the possibilities open to her.



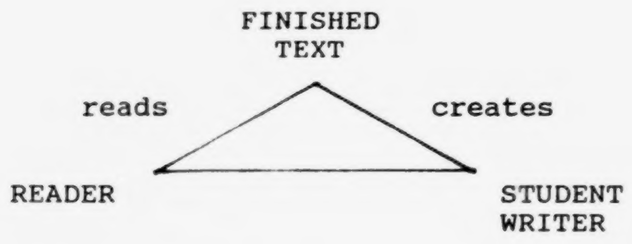
The editorial persona requires both involvement (i.e. real interest in the creation of effective text) and objectivity, two requirements that are hard to develop independently, let alone together. It is intriguing to speculate on the role of electronic text, which is both eminently mutable and somehow disassociated from its writer, in the encouragement of this persona.

Fourth, the teacher can take on more of the role of editor of work in progress rather than acting as evaluator of final product.



In such an instance, the student is an experimenter, more willing to try out different versions with the teacher's help.

Conversely, the student may feel for the first time an ability to produce text that appears to be a finished product -- neat, attractive, polished, and suited for a wider world beyond the classroom.



In this instance, the student can envision himself as a person who works with words in the world of work, something that is hard to imagine when submitting handwritten assignments that never appear finished.

In such ways, wordprocessing may alter not just the product but also the process that takes place in the composition class.

CONCLUSION

Over the past thirty years, educators in Canada have seen several seemingly exciting innovations turn into disappointments. Many of these innovations were technological. The overhead projector was to free us from blackboard and chalk. The 16mm projector was to bring the world into the classroom. The television was to create excitement and involvement for a media-reared generation.

While these resources are indeed used in education, they often stand idle in three corners of the classroom. Educators facing a huge investment in computers cannot be blamed for wondering whether the fourth corner is reserved for the technological innovation of the 1980s, the microcomputer.

This research concludes that the microcomputer is a different type of resource because it is a tool not for teachers but for students to use, accept, or reject. It is a tool that has an impact in both of the contexts introduced in the beginning of Chapter 3.

In the writing class, the microcomputer equippped with wordprocessing software affects students' attitude and approach to writing. As the research documents, for a large majority of the students studied here, the influence was positive. In addition, as this chapter describes, wordprocessing in the composition curriculum can have implications for curriculum and for the roles that students and teachers play in achieving the curriculum's goals.

Beyond the writing class, students adopt wordprocessing for various purposes and continue to use it voluntarily. Writing teachers work hard to convey to students tools, techniques, and habits that will serve them as writers after the last assignment is completed and marked. For many writing teachers, students' voluntary adoption of a writing tool that encourages attention to the complex process of writing is a major indication of that tool's value. In short, the use of the medium, described in Chapter 3, with implications discussed in Chapter 4, carries a very important message.

BACKGROUND, PROCEDURES AND DISCOVERIES

CHAPTER 5

RESEARCH AND CURRENT LITERATURE ON COMPOSITION, COMPUTERS, AND CURRICULUM

INTRODUCTION

The second section of this report, BACKGROUND, PROCEDURES AND DISCOVERIES, comprises five chapters, and begins in this chapter with a review of some of the literature that shapes the context of the study. This review is one of two presentations on the literature; the second is an annotated bibliography developed over the research period and found at the end of the report.

This chapter is divided into two sections. The first discusses some of the literature on research in composition; the second, some of the literature on computers and composition. The intention is to provide a perspective on the teaching of writing in the community college, with direct reference to the use of the computer in that teaching.

A major theme in composition research in the last several years has been the interest in writing as process, rather than product. It is this theme that provides the crossover between composition research and wordprocessor research. While it is true that the steady reduction in price of the microcomputer has been in part responsible for its consequent use in many programs, that is not the main reason for its attractiveness to the college writing program. Rather it is the fact that the computer experience fits so well with the modern conceptualization of writing as process.

It is interesting to contrast the computer-assisted instruction idea of how the computer should be used in learning. This model of the computer came directly from the programmed learning experience of the early 1960s and was translated first into mainframe programs then into exercises on the microcomputer. The assumptions of this model are based on a view of language as product: if the learner can be led through small enough steps to reach the product the programmer has in mind, then the process itself will be understood. Language is seen as working through a finite series of rules, and the learner can be conditioned to exercise the process by being put through a series of exercises in these rules.

Of course language does not work this way, though in isolated instances it seems to do so. Instead, it is a high-level cognitive process of problem solving, not a synthetic process of substitutions. The writer, in the model derived from research among actual writers, sets and solves thinking tasks in a recursive manner, repeating the varied writing activities of planning, writing, rewriting, replanning, discovery, and editing. The wordprocessor allows these activities to be carried on at a high level of interest -- i.e., at the idea level, rather than at the level of example-matching in proofreading -- and so serves as an extremely powerful tool for the naive writer, the one who has to learn these activities of process, as well as for the experienced writer.

With the advent of the wordprocessing laboratory for writing, several features of the process model approach to writing become more attractive than they are in the older classroom. Technical features of the tool itself (fluid, changeable text; block moves; insertion/deletion; search and replace; ease in producing multiple drafts) make it easy to place in the foreground aspects of revision. Additionally, the public nature of the lighted screen makes collaboration and writing to a live reader more common, perhaps more necessary. Hence there has been a mutual reinforcement of ideas between composition research and computers and composition research. In addition, because the computer can make much of the process of writing recordable, it serves also in this way to help us understand better some of the processes of writing.

RESEARCH IN WRITING

Several sources offer general background to the issues involved in the teaching of writing. Though few specifically address the problems of the colleges of applied arts and technology in Ontario, they offer a context from which to approach questioning of the teaching and learning of writing for this segment of postsecondary education.

A broad overview and extensive bibliography are offered in Scardamalia and Bereiter's "Research on Written Composition" (1986), which identifies nine themes in the research on writing from very young children through adulthood since about 1976. A long discussion of the research may also be found in Hillocks (1986). An accessible text, both speculative and suggestive, is Writing and the Writer (Frank Smith 1982). Because the Ontario colleges teach so much writing, questions pertinent to the American college population are often relevant to the Ontario situation; some of these are discussed in Writing Instruction in Nineteenth-Century American Colleges (Berlin 1984).

A summary of the two paradigms in the teaching of writing currently under discussion is presented in an unpublished paper by Lynn Holmes (1987), who writes from long experience in the community college. Put loosely, the contrast in views, perhaps conflict, in the teaching of writing is between the "current-traditional" model and the "new paradigm". The former is concerned with correctness, the linear development of a product, and the putting into words what the writer already knows. The new paradigm speaks of revision, discovery, recursiveness in writing. An extreme view of these two models of writing suggests the current-traditional is error-driven, while the new paradigm is meaning-driven.

Several papers offer the community college teacher ways to look at both students and curriculum that go beyond the assumptions of the traditional textbook and address problems familiar to anyone in the system. Hayes and Flower (1984) indicate that adult writers write differently from naive writers, and important aspects of their techniques can be taught. Where the traditional textbooks suggest that writers plan, draft, and revise their work, "real" writers write recursively, and several things are going on at once: a search for informing ideas, drafting and trying plans, movement from phase to phase and back again, and so on. Pianko (1979) concludes that naive writers (college freshmen) do not have an adequate model of the writing process to work from, thus the intent of the teacher should move from focusing on the product to helping students expand and elaborate the stages of the process. Gay (1984) found the students in her study saw writing as outer-directed, rather than self-directed. Both these researchers cite attitude as a major factor in the writing of college students.

For specific research among a large population, it has been worthwhile to examine the work of Pringle and Freedman (1985) with Ontario public and high school students.

For a number of reasons it is difficult to find in print general discussions of the English programs in the community colleges of Ontario. The secondary school system in contrast has a large support and advocacy system for its English programs. These include the colleges of education, ministry guidelines, board and ministry consultation and in-service training, and professional associations such as the Ontario Council of Teachers of English. The universities generally train their own faculty and develop their own curriculum from a long and broad background, and discuss and test their work through publication in various forms and forums. The curriculum in one university English department is likely to appear much the same, at least to an outsider, as that in any other, and like that of the secondary school system English course of study, is continuously available in print. This is not the case in the community colleges.

The colleges do not have a common way of approaching the English curriculum, nor do they offer very similar programs, nor do they publish discussion of their work in these fields. This may seem negative to anyone not familiar with the system, but it has some advantages. A generally felt need in the community colleges in the last two decades has been the teaching of writing and reading. If these needs seem tautological to those familiar with the university system ("What else does the English program do?"), they might ask themselves how much discussion and presentation of programs in, for instance, rhetoric, has been carried on in the university English field in the last two decades?

A disadvantage of such a fragmented system is that the means of discussing and testing ideas and practices in the curriculum are also uneven. Faculty might be attracted to the possibilities in the member groups of the Learned Societies, for instance, or the Councils for the Teaching of English; or they might present papers at conferences of American academic and college faculties. None of these, however useful in interpretation, serves the specific needs of the profession of English teaching in the colleges of applied arts and technology.

The colleges do have their forums: the Heads of English, for one, and CALL -- College Association for Language Learning for another. Since 1984 the Metro Toronto area colleges have sponsored a one-day conference on computers and English, which in 1987 extended its invitation to all the colleges in the province. Occasional conferences, such as one held at Niagara College in June, 1986, address problems and suggest solutions in teaching. None of these forums presents papers in the formal way of, say, the Canadian Association of Teachers of Technical Writing.

To sum up, we can say that while there is a great deal of information available both to the researcher and teacher in the field of writing in the community college system, little of this information comes from the system itself, and still less is to be found in print. Both for the design of research and the analysis and development of curriculum, persons seeking information must go to other educational systems such as the graduate schools of education, and conferences abroad.

In the matter of computers in education, and computers in English, the picture for the college system is a little fuller, though not much.

COMMENT ON THE WORD PROCESSING LITERATURE

A number of questions attach themselves to the phenomenon of the computer and the writing program in the college, and the brief comment in the next few pages offers some guidance to answers to these questions. An annotated bibliography is also found at the end of the report.

As with the writing program and research into writing in general, it is not easy to find specific reference to the Ontario college experience, but there is extensive associated literature. Since the interest in this research study is in the uses of wordprocessing, ancillary programs and other computer uses such as computer-assisted instruction have not been reviewed. Indeed, the themes that come from both the experience and the research elsewhere suggest that there is little interest in computer-assisted instruction (CAI) in English within the profession itself. On the contrary, two tendencies stand out: the faculty member must become familiar with the technology, since computers have the power to enhance the writing program; and both teachers and pedagogy must change when the computer is added to the writing program.

Here are some questions that have informed our bibliographic and other inquiries:

> What does the computer mean to the traditional activities of writers and readers?
>
> What influence does the technology of the computer have on these activities as learning at the college level?
>
> How have programs and perhaps writers been changed by the adoption of the computer as wordprocessor?
>
> What questions has the literature suggested for the research this project has undertaken?

A very large cumulative bibliography on wordprocessing and connected technologies is found in Morgan (1987); this is a broad collection of about 1500 titles, papers, and comment from sources as divergent as careful academic studies and popular magazines. A somewhat more focused bibliography by Schwartz and Bridwell (1984) comes out of the American university research and teaching, and ties together mainframe and microcomputer experience; it is somewhat dated, but still valuable. A more recent annotated bibliography for the college teacher is Huard and Malinowski (1986); this bibliography itself mentions other bibliographies.

Daiute's Writing and Computers (1985) surveys the field from early education through college, and offers both theory of writing and examination of writing with a wordprocessor and ancillary software. Rodrigues and Rodrigues (1986) present an essay that describes the rationale for using wordprocessors in the writing program at the college level. General survey articles that cover many of the issues for the Ontario colleges are Smye (1984, 1987) and Myers (1986, 1987).

Comments on the experience of writing with the wordprocessor are legion -- in fact, the urge to comment on this phenomenon is not restricted to those who have used a computer in their work: occasionally a famous author will be induced to remark on the efficacy and attractiveness of the wordprocessor, whether or not he or she has ever used one. William French (1987) says that the influence of the machine on his writing is such that he makes more errors. For a sanguine view, see Wilson (1984).

Like persons elsewhere in the humanities, some English faculty both loathe and fear the advent of computers. While some of these strong feelings stem from unfamiliarity, they also represent legitimate fears of the technological society. Several cautionary notes may be found: the fear of "reducing curriculum to technique" (Henchey 1983, Brown 1984), and of a centralized manipulation of curriculum (Frank Smith 1983). Daniel Chandler (1985) reviews the anti-technology theme in English studies in an article that suggests computers may be used to extend the potential of the learner.

Many people remark that the extension of computer technology into communications means different ways of perceiving; indeed, of reading. Anderson (1986) suggests, with others, that type-formed text shows characteristics of dialect that should be acknowledged and studied. Certainly the computer as writing tool makes accessible to the ordinary writer all aspects of text preparation from thinking-reflection assistance to the incorporation of graphics and information. There is an extensive literature on this development (loosely called desktop publishing); discussions immediately useful to the college teacher are found in Bernhardt (1986) and Carney (1987).

Whether the computer "in and of itself" contributes to the effectiveness of student writing products and processes has not been proven to the satisfaction of some researchers (Brysom, et al. 1986, Harris 1985, Kurth 1987), while others (Daiute 1985, Rodrigues 1985, Williamson 1987) report changes that range from increased length of text to changes in attitude to composing. Formal studies of the type that seek to determine whether student writing changes in measurable ways are large in number, beginning with Collier (1983), who, in a study of a small number of students at Mount Royal College in Calgary, found no differences. The series of studies carried out at the University of Minnesota under Donald Ross made important contributions to both the study of the act of writing and the use of the wordprocessor (Bridwell and Duin 1985; Bridwell, Sirc, and Brooke 1985). The study carried out at the Halton Board in Ontario by Carpenter (1986) indicated that Grade 6 students tended to write more with the wordprocessor, and they tended to like using it.

It should be pointed out that most studies of the influence of wordprocessing on student writing have used a very small number of subjects, and very few situations have made available the wordprocessor at times of the writers' choosing. Craig Etchison's University of Indiana study of about 180 university freshmen is a contrast to this (Etchison 1987).

For specific types of students, the wordprocessor appears to have a substantial influence on how they write and what their writing reads like. The University of Minnesota General College study with learning-disabled students is producing valuable information on this observation, one noted by many teachers (Collins and Price 1986, Collins 1987). Segal (1987) has documented the changes in her students at Lester B. Pearson Collegiate in Scarborough; see also Myers (1985).

As the wordprocessor will be found more and more among writers and in writing programs, faculty will be interested in sources for guidance in developing teaching techniques. Cynthia Selfe (1987) recommends a writing laboratory be designed around writers, writing teachers and the writing program, and not around computers. Two books offer teaching ideas for the range of writing courses from junior high school into college; they suggest that advanced wordprocessor software offers the teacher tools for the development of curriculum (Kress 1987; Rodrigues and Rodrigues 1986).

CONCLUSION

The sources indicated here describe the changed context for the writing curriculum in the college setting and elsewhere. If writing-as-process is the idea that will inform the curriculum, and the writing teacher then must be able to interfere in the process, then a strong argument can be made for providing tools that enhance the classroom where the teaching and learning take place. A further implication of the changed context for writing is found in the increasing crossover between academic concerns about writing and the uses of writing in the world of work outside the college. The bibliography collected by Morgan (1987) suggests a rich new realm of delight in text on the horizon for those who write.

CHAPTER 6

METHODOLOGY IN DETAIL

This chapter outlines the method we chose for the study, and provides a narrative outline of the conduct of the research.

To be effective, our research needed to be assured of several key requirements: that a large number of students would be involved in the study; that the design of the study had the confidence of the teachers involved; and that the wordprocessing-in-writing curriculum was the ordinary one and not one designed for the study itself. Our preference was to study a real curriculum in action, and this included a preference for respecting the quite varied approaches taken by the faculty toward the same goals in the first-semester curriculum.

The purpose of this research study was to describe how a large number of students entering a college of applied arts and technology for the first time would adapt to the use of the wordprocessor -- for instance how their attitude to the act of writing would change, and how the act of writing itself changed. We were also interested in finding out as much as possible whether the products of their writing showed changes attributable to the wordprocessor, but we were not sanguine about isolating such features, given the history of writing research.

We realized that we would have several components in the study because we were looking for a number of different types of information.

These components were:

student writing
student attitude to and descriptions of writing,
student comments on writing and its uses as elicited in interviews
student reaction to the use of the wordprocessor in writing.

We designed the study to be carried out in three stages:

1. September (beginning semester I): A survey and writing sample gathered from the whole study population; 5% of these students to be interviewed.

2. December (end of semester I): A survey and writing sample gathered from the whole study population.

3. March (near the end of semester II): A survey elicited by mail from the whole study population.

In 1985-86 we undertook a trial study involving a smaller population in order to test the design. That experience was most helpful. The formal study was conducted in 1986-87.

Numbers and Attitude in Research in Writing with Computers

The literature on wordprocessing and composition available at the time the study was devised described valuable work among very small numbers of writers -- as few as six in some cases. We wished to follow a much larger number of students. Chapter 9 reviews some of this literature, as well as more recent publications, and the annotated bibliography at the end of the report indicates specific relevant studies. While more recent studies have described the influence of wordprocessing on larger numbers, the present study remains unique in two ways: it seeks to describe the adoption or not of a writing tool and seeks to follow the adoption of the tool beyond the period when the students would normally be constrained by course requirements to use it.

Most of the literature that describes the work with student writing on the wordprocessor mentions the affective element, often as incidental to the intentions of the studies. We acknowledged from the beginning that how people feel about their writing -- whether they write for themselves, gain satisfaction from the process and product of their writing, whether they use writing for their own purposes, whether they play with writing -- has a lot to do with their effectiveness as writers. We wished to describe changes in attitude to writing attributable to the wordprocessor, both positive and negative. For instance, many students come to college as "mature" writers; would they be helped or hindered by the wordprocessor?

The measurement of attitude to writing in research among college and university students in the United States refers to the work of Daly (1983), which points out a correlation between feelings and ability in writing. Gay (1984) studied three college writers and their background to determine how attitude affected writing. Informal surveys of response to the use of computers in writing programs have been used in several studies; for instance, Kiefer and Smith (1983) in their introduction of editing assistance software at Colorado State University.

A radical shift in attitude toward writing might be portentous for literacy in society in general. People who gain pleasure from writing to their own purposes and find it easy to create text might thus find themselves using text more frequently. On the other hand, an attitude change may prove to be simply the momentary attraction of something new, like skateboarding. In a consumer society, the learner of another machine skill drops the new knowledge into the mind-closet and looks for the next new toy.

The Importance of Teachers

The teacher in the mix is central, however; just how central may be seen, for example, in presentations by persons working with learning disabled secondary pupils and university students. This is the subtext of presentations like those of Segal (1987) and Collins (1987). It has been a central consideration that we have received the advice of the faculty whose students we were studying. Indeed, we were dependent on their good will and high level of professionalism. Specifically, they assisted materially in assuring we used appropriate research tools; they carried out the administration of the study; and their comment and analysis ensured the results captured the students' writing and attitudes as teachers observed them through the semester.

Review of the Study Design

When we first drafted the design of this study in early 1985, the curriculum we expected the students to follow included about 14 hours of class time in wordprocessing in the course of the fall semester, out of a subject length of about 60 hours. About half the students entering the English program would be taught wordprocessing as part of their writing subject. Wordprocessors were available for student use on their own time throughout the week. We hoped to study about 400 students taking this curriculum.

Between the time of the draft of the study design and the first discussion with the faculty involved, however, the first-semester curriculum had been redesigned. The wordprocessing component had been reduced in the curriculum to about 4 hours for the average class, and extended to all first-semester students. We then redesigned the study, with the approval of the ministry, to take place over two academic years. The first year, 1985-86, would be a trial phase, in which we tested the design, and 1986-87 would be the formal study year.

Phase I -- 1985-1986 Design and Trial

In the trial phase of the study, with the assistance of three faculty members, we surveyed and received test essays from 287 first-semester students, and interviewed about 5% of them. One faculty member became ill during the semester, and these classes were as a consequence deleted from the study. At the end of the semester, we surveyed 111 of the remaining students, and in the second semester, surveyed and interviewed about 20 of these students who were still in the college in April.

This trial phase was most valuable for assessing the usefulness of the survey form, enabling us to make revisions which gave us more detailed information on student writing attitudes and habits. The interviews were especially helpful in finding out how individual students thought about their writing procedures, products, and history, and how some reacted to the experience of learning to write with a wordprocessor. All the information gathered and analysed indicated to us that our approach was sound and that we would gather a large amount of important information in the study itself.

Phase II -- 1986-1987 Formal Study

The recruitment of faculty for the formal phase of the study took place in the spring of 1986 with the issue of an invitation to review the trial phase of the study and discuss the design and procedures for the study itself. We hoped to recruit enough faculty so that the initial number of students in the survey would be about 600; in fact, the 10 volunteer faculty were in September able to provide 649 first-semester students for the study. These students themselves came from 40 programs, and represent a broad cross-section of the students entering studies at Newnham campus.

We wished to look at the writing of the students as they began their semester's studies, but as Pringle and Freedman (1985) point out in their study of pupils in the public system, the product seen in the test setting may not be the best or the most real writing the writer may do. We did agree, however, that even with necessary compromises, a one-class session essay on a topic chosen from two given to the students at least a day in advance of the in-class test would be adequate for our purposes. The time we asked teachers to take from their regular curriculum to conduct elements of the study we hoped could be kept to a minimum, and most of the elements we added could be sensibly integrated into the faculty member's own curriculum. The questions for the September 1986 essay are found in Chapter 12.

During the first few days of class, students filled in a survey form on their academic and relevant personal background, and checked off responses to a series of questions on writing habits and attitudes. The survey for September 1986 is found in the documentation section, Chapter 10.

In addition to writing the test essay and filling in the survey form, students selected by faculty from each class in the study were interviewed by one of the principal investigators. We assumed that we would get a broad sample of students with this method of selection, and in fact we did so. We intended to finish the interviews by the end of the second week of classes; beyond this time, we felt, we would not be getting a recollection of experience, but a comment on or reaction to the new course in writing the students were enrolled in. A discussion of the interview questions and techniques, and sample interviews are found in Chapter 11.

The researchers graded the essays on a 4-point holistic scale. The responses to the survey form were entered into a data base using dBASE III, and then summarized in several different ways.

As part of their College English semester subject, the English faculty taught their students the use of the wordprocessor in writing. (Two sample course outlines are found at the end of this chapter.) For most of the classes in the study, this instruction consisted of four hours of in-class instruction and experience in the wordprocessing microcomputer classroom, either as 4 classes in a row, or 1 class a week for 4 weeks. Some faculty gave more instruction than others in the use of the wordprocessing software, and some faculty held workshop sessions once a week as part of the regular program. All students had equal access to wordprocessing equipment on their own time: the facility was open from 8 a.m. to 10 p.m. on weekdays, and for 10 hours on the weekend. The wordprocessor program used was WordStar 3.3, which had been chosen as the standard wordprocessing software for the college in 1984.

During the course of the semester we analysed the survey responses, the essays, and the interviews, and discussed them with the faculty whose students were in the study. We then designed the end-of-semester survey and essay questions, and had a second meeting with the faculty to discuss procedures for administering the survey and to set a time for the end-of-semester essay test. This essay was to be written on the wordprocessor near the end of the semester: the students would again be given two topics from which they were to choose one that they could prepare before the next class. This class was to be held in the wordprocessor classroom, where the essays would be written on the machines.

Carpenter (1986) spoke about the problems of getting a clean study design executed in a system as complex as a public school board; the community college provides a setting no less complex even if the sample is drawn from only one campus. For instance, on the December essay day for several of the classes in this study, a snowstorm began at about 7 a.m., with consequent decimation of attendance: exigencies of scheduling the limited resource of microcomputer classrooms meant that we had to accept these reduced numbers. Some faculty made allowances for students who had difficulty in writing anything in a test situation, and encouraged them to write the essay on their own time. In the case of two teachers, the students submitted disk copies of their essays, which the faculty then printed out for the study. Most students wrote the essay and printed it within the one class period.

The December survey responses were again entered into a data base for summary and analysis, and the written comments of the students in answer to the question "In summary, how has wordprocessing affected your writing habits or your attitudes to writing?" were typed into wordprocessing files as a separate source of information. These written comments from the students provide significant anecdotal information.

In March, we mailed a survey form to all students in the study who returned to the college for the second semester (n=358), and received 53 replies (14.8%). We sought with this survey to determine whether students had adopted the wordprocessor as a tool in their own writing, and whether that writing was in their college work or in their private lives. As with the December survey, the anecdotal comments provided valuable information on attitude and student perception of the experience.

Summary

After a trial of the method in 1985-86, 29 classes of first-semester students enrolled in an English course at a college of applied arts and technology participated in a study of their writing and attitudes to writing and how these were influenced by learning to use the wordprocessor. These students were taught by 10 faculty and were registered in 40 college programs. The 649 students in the study in September, 1986 wrote a set essay and filled out a survey on their writing habits and attitudes; the principal investigators interviewed 35 of this group, or about 5%. In December, 405 of the students wrote another set essay, this time on the wordprocessor, and answered another survey. In March of the following semester, the researchers mailed a third survey to the 358 students from the December group who continued their studies and received 53 replies (14.8%). In the December and March surveys, student anecdotal remarks provide important information in addition to the other responses on the form.

CHAPTER 6

Numbers in the formal study:

September 1986 survey	649
interviewed ...(about 5%)	34
December 1986 survey (matched Sept.)	405
Students in this group remaining in the college in March	358
March response ..(14.8%)	53

CHAPTER 7

INTERVIEWS

THE PURPOSE OF THE INTERVIEWS

Interviews with a sample number of students were the primary means for addressing the study's focus on how they wrote and how they felt about writing when they entered college. It was important to capture some of the language they used when they were able to talk in their own words about writing, both for school purposes and for their own. Of special interest was what they were conscious of when they wanted to articulate ideas about writing and its uses.

For a number of reasons, the methods the researchers chose to use both in selecting the students and in conducting the interviews were relatively informal. We were not interested in a statistical compilation from the interviews; therefore a more formal and systematic method of selecting students was not needed. The choice of students for the interviews was left up to the faculty members whose classes were involved in the study. We discussed with faculty the problems we had had in the trial set of interviews in 1985 -- even as pedestrian a question as the exact location of the offices where the interviews were to take place had been a problem for some students. Generally, we asked faculty to recruit students in proportion to the numbers they would provide for the study; this proved to be satisfactory. Only one faculty member had to bribe some of the students (with chocolate). Limitations of time meant that we could comfortably interview about 5% of the students in the survey classes.

INTERVIEW METHOD

The interview method was tried in September 1985 and proved adequate for our purposes: the interviewer sat facing the student with a blank question form and made notes of the answers, later transcribing them into the wordprocessor. The questions and comments are included in the transcripts that follow.

Sometimes the interviewer engaged the student in discussion to clarify a point raised in a question or raised by a comment from the student, though usually, we tried to capture just the response to the bald question -- warts and all. Our comments at the opening of the interview usually were paraphrases of the introductory statement shown on the interview form.

Generally we tried to note the student's own words, with particular attention to the student's idiom and the way in which answers were delivered--a word or a short phrase, a rephrasing after a first try at a reply. On occasion, it was necessary to interpret the intention and conventionalize the response, making whole sentences, making subject and verb agree, completing the conventional phrase, or rendering it in its common form (honey "comb", not honey "cone"), but for the most part, the transcripts of the interviews show an oral language, not a print one -- or a draft, not a revised version.

In some studies of this type, the interviews are recorded on audio or video tape and then the voice part is transcribed into print. We considered this, but rejected it as expensive and time-consuming. We preferred to have the larger interview sample afforded by the shorthand method, rather than a small one with the tape-transcription method. If a principal investigator interviews the students, and the results are cross referenced to other questions and to the other principal investigator, the conclusions should be authoritative. From time to time the interviewer might stop the student to seek a repetition or rephrasing for accuracy in quotation, but the usual practice was to accept the initial phrasing. Each interview lasted about 20 minutes.

THE STUDENTS

It was a pleasure to interview the students. Of significance was the positive attitude almost all displayed to being in college. In several cases, the students were away from home for the first time, and so the college experience marked an important step.

A number of students were returning to studies after some interruption in their schooling. Some had graduated from high school in January, through the semester system, so the hiatus was brief. For others, the return to schooling came after an absence of several years.

How successful these students will be in their adjustment to college is not clear in September, of course. But some begin with a material disadvantage: some students spend as much as three hours a day in travel, and others are occupied with nearly full-time jobs. Both these circumstances make college success more difficult than for those who have perhaps a fifteen-minute walk and all their time outside of class clear for study and the other activities of student life.

It was apparent in several interviews that success in college would be difficult for several of the students, either because of the demands outside of college -- the need to support a family, for instance -- or the physical strain of travel, or the mismatch of study skills and course demands.

Something that may be worth exploring is the lack of a common language to talk about language. When the students were asked to characterize good and bad writing, they often fell back usually on the hoary "grammar and spelling", though interestingly this comment usually came from those students who had been streamed in the English Division entrance test into special classes: they were persons who had lower confidence levels than others, and had been found wanting, perhaps over and over, by the system that judged their writing. This judgement of their writing had had a strong effect on some students, as the interviews show. Few mentioned the reader as important in writing. Some talked of coherence, but did not use the term. Many students simply selected the first aspects of writing that came to mind, rather than trying to be encyclopedic in their responses to the questions.

In spite of the lack of a vocabulary to talk about writing, however, the majority of students were confident of their writing, even those who disdained the activity. This is borne out also by the responses to the survey form. Even if a student in the interview expressed difficulty with spelling or 'grammar' or organisation or sentences, he or she usually did so with good humour. Indeed, they would indicate in spite of this, a fairly high degree of confidence in their writing. This confidence was not always reflected in competence in their writing samples, however.

Most talked with a positive attitude to writing. Three said that writing played an important part in their own lives -- almost a therapeutic role, as the comment below on writing being preferred to drinking shows. One said he wrote poetry for expression; another, that keeping a journal was an important part of her life.

Several students expressed a "reviser" approach to writing. That is, they would draft and rewrite, given the opportunity. And while few students revised their class notes made in school, a number used writing as a learning tool as well as a tool for self-understanding as indicated above.

CONCLUSIONS ABOUT WRITING

It struck the interviewers that writing was often seen as the activity carried on in English classes, and occasionally in history or geography. While we did not pursue this question thoroughly, and the comments may have been biased because of the 'English' sponsorship of this study, it appears that even in Grade 13 writing does not form a part of the study method in courses other than those mentioned, and it is the rare student who undertook "revision" in the old sense of reworking the class notes or lecture notes.

Yet occasionally a student would express more than a utilitarian view of writing, articulating an observation about how writing was important for expression of feelings or search for understanding. For instance, in answer to the question, "Do you like to write?" one person who had been out of school for three years answered: "Yeah, I love writing. It's a good outlet. I can write better than I can talk to describe my feelings. It's a lot healthier than drinking." Another student talked of how important her journal was to her: "Have kept one for years. Like a diary, what's happening. Good to vent emotions that way, especially to vent them this way [rather] than to take them out on people. It's nice to look back on [the journal over several years]."

Thus the two primary purposes for writing among this group seemed to be for school and for oneself. Only five students had had experience in using writing in a work situation. Two of these had to write point-form reports, two of them "made up" letters, and the last one published a newsletter in a high-school situation. We assume then for the survey population as a whole, that their assumptions about work demands on their writing are hypothetical. This lack of experience in writing for different audiences might explain the fact that few of the students mentioned the reader as a direct concern in writing.

VALUE OF INTERVIEWS

Interviews are most helpful in a study such as this. With the great batches of numbers we are able to derive by putting the answers to a questionnaire into the computer, it is tempting to abstract and generalize completely. Meeting some of the students under study moderates this tendency, and reminds us it is individuals who write and use writing, and who come to college to learn. It is a privilege to talk to these people, and a discovery.

SURVEY SUMMARY OF STUDENTS INTERVIEWED

All students interviewed were in their first semester at the college; of the 33, 14 were female and 19 male. A slightly larger percentage in this group than in the population as a whole had completed only Grade 12 English (48% v. 40%), but about the same percentage had completed Grade 13 (30% v. 32%). Virtually the same spread of experience with computers was indicated. Some 21% had a computer at home (17%). More (67% v. 60%) were native speakers of English, but they felt the same confidence level as the group as a whole. Interestingly, more in this group (85% v. 60%) thought they would have to use a computer to write with when they went to work. As a group they indicated they wrote more than their cohort (63% indicated "yes" to "I write more than one page a week," as opposed to 44%). The other survey responses were virtually the same as the group as a whole.

SAMPLE INTERVIEWS

The next several pages contain transcripts of three of the interviews we conducted in September 1986. They are intended to show the range of academic confidence in the students in the group under study, and to give the flavour of the language these students used when they talked about their writing. The first is the successful high-school student who remembers what the teacher has said and goes about doing it (and cannot understand why others do not do likewise). The second is a student who has not been successful in language work at school, and who has had an equally unhappy response to her or his academic work from the family. Last is the "average" student ("pass in the low 60s"). All those interviewed took the occasion most seriously.

Please note that the student replies have been typed in capitals so they will stand out from the interview questions.

RESEARCH PROJECT ON
WORDPROCESSING AND COLLEGE ENGLISH

September 1986 interview questions:

Name: (last) (first)

Student number:

Class:

Semester in the College: 1

Thanks for coming to this interview.

The purpose of this interview is to help us gain an understanding of what you do when you write, either on your own or as part of your school work, and what you think about writing. Some of the questions require a brief answer, while some of them seek a longer comment. There are no 'right' answers; we are interested in what you have to say.

The researchers will preserve your anonymity in making use of your comments for study purposes.

What do you think is involved in "good writing" ?

IT'S APPEALING TO THE READER; IT'S NATURAL-SOUNDING TO THE READER IF IT SOUNDS LIKE SOMEONE TALKING TO THE READER. DOESN'T SOUND LIKE A DICTIONARY. ALL FITS TOGETHER IN A NATURAL FLOW INSTEAD OF JUMPING AROUND.

What do teachers mean when they say writing is "good" or "bad" ?
I WOULD THINK IF IT IS GOOD IT FOLLOWS THE GUIDELINES THAT THEY GIVE US. STRUCTURALLY GOOD. IF IT'S BAD, OPPOSITELY IT'S NOT STRUCTURED. MOST TEACHERS TEACH THE SAME THING -- TELL US TO WRITE THE SAME WAY. (Interviewer: why don't students write that way?) MAYBE THEY'RE NOT CLEAR ON WHAT TO DO. STUDENTS DON'T THINK IT OUT.

In what class were you taught writing in your last year of high school?
JUST ENGLISH GRADE 13 1985-86 (JUNE 1986 SEMESTER)

What advice do you best recall your teachers giving you personally about your writing?
(PAUSE.) PERHAPS. UMM. MAKE SURE EVERYTHING IS

TOGETHER...ALL THE PARAGRAPHS JOIN TOGETHER. THAT'S...THAT STICKS IN MY MIND.

How long does it take you to get to the college in the morning? to go home at night?

35 MINUTES DRIVING

Would you say you generally had a successful experience with writing in high school? Tell me about it.

GENERALLY YES. I'VE ALWAYS BEEN CONSISTENT IN ENGLISH. 79% GRADE 13 + 79% GRADE 12 TOP HALF (OF CLASS)

What do you think is the best feature of your writing?

I FOLLOW A GOOD STRUCTURE. IF I THINK IT OUT IT MAKES SENSE, I DON'T USE A LOT OF GIGANTIC WORDS. IT'S EASY TO READ.

When you have to write a homework assignment -- an essay or report -- how do you do it?

IF I HAVE A LOT OF IDEAS I'LL MAYBE JOT DOWN A FEW POINTS TO BASE PARAGRAPHS ON THEN START WRITING THEN REVISE AND REWRITE AND EDIT. IF I DON'T KNOW MUCH, I'LL TAKE MORE TIME TO THINK OUT IDEAS AND POINTS.

What advice would you give to someone who wanted to know how to write better?

FOLLOW THAT STRUCTURE THAT WAS TAUGHT -- STICK TO THAT. MAKE SURE PARAGRAPHS SOMEHOW JOIN...EVERYTHING SHOULD CONNECT.

Do you like to write?

WHEN IT'S SOMETHING THAT INTERESTS ME AND I HAVE A LOT OF IDEAS FOR.

Can you describe an instance in which you have found writing to be frustrating?

YES. DURING HIGH SCHOOL IN ENGLISH CLASS. SOMETHING I COULDN'T ELABORATE ON -- NOT OFTEN.

Where and when do you do your best writing?

I GUESS PROBABLY IN THE SCHOOL ATMOSPHERE. (WHY?) TOO MANY DISTRACTIONS AT HOME.

What kinds of things do you like to write?

WELL. GENERALLY JUST THINGS I HAVE AN OPINION ON -- HOBBIES, THAT KIND OF THING (AVIATION).

Do you revise the notes you make in class -- that is, do you rewrite them?

SOMETIMES GO OVER AND IF A NOTE WASN'T CLEAR I'D ELABORATE ON IT. USUALLY WRITE SO I CAN UNDERSTAND IN THE FIRST PLACE.

When I say "This piece of writing needs revision" what do you think I mean?

MAYBE --- SWITCHING SENTENCES OR SWITCHING WHOLE PARAGRAPHS AROUND. MAYBE THERE'S A FEW MISTAKES. NEEDS TO BE RECOPIED.

Tell me what you do when you have to write an essay in class on a topic given to you by the teacher.

WELL. SINCE YOU'RE NOT GIVEN A LOT OF TIME I'LL JUST START WRITING AND PUT A LOT OF IDEAS INTO PARAGRAPHS. IF THERE'S A LOT OF TIME, I'LL MAKE A ROUGH COPY AND REWRITE.

What kind of writing do you do? Do you write letters or postcards while travelling, for instance?

LETTERS ONCE IN A WHILE.

Do you write because you need to at work or at home -- for instance, letters or instructions?

NOT AT HOME. AT WORK, MAKE UP LETTERS. SUMMER AND PART TIME FOR ABOUT TWO YEARS.

Do you ever write stories or poems?

JUST FOR SCHOOL.

As you can tell from the questions I have been asking you, we are interested in how you feel about writing. In summary, how would you describe yourself as a writer?

I'M THE TYPE OF PERSON WHO ONLY WRITES WHEN THEY HAVE TO. AVERAGE WITH RESPECT TO PEOPLE THAT I KNOW. (Interviewer: You don't have any fears of writing?) NO.

general impressions

length

other comments: I interviewed two students from this course one after the other, and their styles and answers were similar: they worked to give the teachers what they expected, saw the teachers as authorities in writing whose advice was to be followed, did their best writing in school, and appeared bright. The rhetoric they described was the classical textbook writing -- strong topics, strong paragraphs, working from notes or a plan. Apparently both found it easy to articulate ideas; ideas come fully formed from their minds.

RESEARCH PROJECT ON
WORDPROCESSING AND COLLEGE ENGLISH

September 1986 interview questions:

SAMPLE INTERVIEW #2

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first impressions

SHY -- UNCERTAIN

Thanks for coming to this interview.

The purpose of this interview is to help us gain an understanding of what you do when you write, either on your own or as part of your school work, and what you think about writing. Some of the questions require a brief answer, while some of them seek a longer comment. There are no 'right' answers; we are interested in what you have to say.

The researchers will preserve your anonymity in making use of your comments for study purposes.

What do you think is involved in "good writing" ?

GOOD PUNCTUATION. NO MISTAKES IN SPELLING. IF IT'S A GOOD STORY IT'S GOT TO HAVE A GOOD PLOT. AND IF IT'S AN ESSAY YOU'VE GOT TO TELL THE TEACHER WHAT'S ON YOUR MIND AND PUT IT ON PAPER.

What do teachers mean when they say writing is "good" or "bad" ?

WRITING IS GOOD BECAUSE YOU NEED IT (The student has misunderstood the question, translating it as 'what good is writing?) GOT TO BE ABLE TO READ AND WRITE ON THE JOB, JUST CAN'T SURVIVE WITHOUT IT.
(TEACHERS ARE) JUST TRYING TO HELP; IF IT'S BAD, HAVE TO IMPROVE.
(Interviewer: We came back to this question later; the student talked about the kind of writing he liked to read, and brightened considerably when he mentioned that he had read the biography of Chuck Yeager in two nights.)

In what class were you taught writing in your last year of high school?

GRADE 12 GENERAL ENGLISH. DID OUR JOURNALS AND ESSAYS AND STUFF.

When did you take your last year of high school?

1985-86. ENGLISH IN FIRST SEMESTER.

What advice do you best recall your teachers giving you personally about your writing?

THEY SAID I NEVER PUT IN PERIODS, I JUST RUN ON, THAT I SHOULD PUT IN PARAGRAPHS INSTEAD OF JUST RUNNING ON. I STARTED PUTTING IN MORE. (Interviewer: That helped?) I GUESS.

How long does it take you to get to the college in the morning? to go home at night?

ONE HOUR

Would you say you generally had a successful experience with writing in high school? Tell me about it.

GRADE 11 AND 12. YEAH. COULD HAVE BEEN TAUGHT MORE IN 7 AND 8 -- SEEMED I LEARNED MORE IN 11 AND 12. SUPPOSED TO LEARN BASICS (PERIODS, APOSTROPHES). I GUESS I DIDN'T LEARN THAT.

What do you think is the best feature of your writing?

MY IMAGINATION. SCIENCE FICTION STORIES (I CAN WRITE)

When you have to write a homework assignment -- an essay or report -- how do you do it?

USUALLY -- ALWAYS I DO A ROUGH -- THEN I CHECK THAT. USUALLY I DON'T LIKE SHOWING MY WRITING TO ANYONE. IF THERE ARE MISTAKES I CAN FIND I CHECK THEM, IF I CAN'T I LEAVE THEM, IF I WAS GIVEN IT A WEEK AHEAD -- I'D DO IT SUNDAY NIGHT FOR MONDAY MORNING, GOTTA CHANGE THAT. DO BOTH COPIES.

What advice would you give to someone who wanted to know how to write better?

LEARN HOW TO SPELL. PAY ATTENTION IN GRADE 8. DON'T FOOL AROUND ON THE SPELLING TESTS. (Interviewer: Do you consider yourself a poor speller? Nods.) IN GRADE 12 STARTED USING A DICTIONARY MORE OFTEN. CAN ALWAYS FIND WORDS IN THE DICTIONARY.

Do you like to write?

NO

Can you describe an instance in which you have found writing to be frustrating?

ALL THE TIME

What made it so?

JUST 'CAUSE I DON'T LIKE WRITING.

Where and when do you do your best writing?

PROBABLY UNDER PRESSURE. AT HOME (If it's due tomorrow? Nods.)

-- MY GRADE 5 PROJECT ON HATS. ALL THE DIFFERENT TYPES OF HATS, COUNTRIES. GAVE ME AN 'A' SO I LIKED IT.

What kinds of things do you like to write?

DON'T. WRITE WHAT'S NECESSARY, THAT'S IT, NO MORE. JUST RECOPIED JOURNALS GRADE 9 THROUGH 10,11,12.

Do you revise the notes you make in class -- that is, do you rewrite them?

NO

When I say "This piece of writing needs revision" what do you think I mean?

I DON'T KNOW. CHECK IT OUT FOR MISTAKES. DIFFERENT -- BETTER IDEA MAYBE. GIVE IT MORE LIFE -- IT'S KINDA BORING.

Tell me what you do when you have to write an essay in class on a topic given to you by the teacher.

DO ROUGH THEN I DO AGAIN. SOMETIMES (TEACHERS) SAY PUT YOUR OUTLINE; THAT DOESN'T HELP. EVEN GOING FROM ROUGH TO GOOD I MIGHT CHANGE. THE IDEAS COME AS I WRITE.

What kind of writing do you do? Do you write letters or postcards while travelling, for instance?

LETTERS. TWO TIMES A MONTH TO GIRLS HERE AND THERE, IN PORTUGAL. WRITE IN ENGLISH.

Do you write because you need to at work or at home -- for instance, letters or instructions?

SECURITY GUARD, DAILY REPORTS. POINT FORM. IF I FIND SOMETHING BROKEN THEN (YOU'D WRITE IT OUT) ALL SUMMER.

Do you ever write stories or poems?

NO

As you can tell from the questions I have been asking you, we are interested in how you feel about writing. In summary, how would you describe yourself as a writer?

LIKE ON A SCALE OF 1 TO 10 PROBABLY ABOUT A FIVE -- AVERAGE. I DO WHAT I'M SUPPOSED TO DO, NO MORE, NO LESS.

----

general impressions

length

other comments: A somewhat insecure student, perhaps uncertain of his own competence. He's not where he'd like to be (training to be a jet pilot) and disappointed: he's not bright enough, he says, and apparently so have members of his family said. His demeanour was occasionally self-deprecating, and perhaps there was some anger and frustration there. It would be interesting to explore this: the student sounds like he has good strategies for writing, and can be excited about reading -- perhaps the fantasy element -- but has had few successes in his study life.

RESEARCH PROJECT ON
WORDPROCESSING AND COLLEGE ENGLISH

September 1986 interview questions:

SAMPLE INTERVIEW #3

Semester in the College: 1

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first impressions

Thanks for coming to this interview.

The purpose of this interview is to help us gain an understanding of what you do when you write, either on your own or as part of your school work, and what you think about writing. Some of the questions require a brief answer, while some of them seek a longer comment. There are no 'right' answers; we are interested in what you have to say.

The researchers will preserve your anonymity in making use of your comments for study purposes.

What do you think is involved in "good writing" ?

SPELLING IS IMPORTANT. GRAMMAR AND CLARITY (WHICH I'M WEAK IN ALL -- I'VE A FEELING I'M WEAK IN ALL). GRAMMAR MEANS PUNCTUATION, ABBREVIATIONS, TYPES OF WORDS LIKE PRONOUNS. I'M NOT REALLY FAMILIAR WITH; I'VE ALWAYS MANAGED TO SQUEEZE BY YOU MIGHT SAY.

What do teachers mean when they say writing is "good" or "bad" ?

IT'S ALL THEIR PERSONAL VIEWS ON IT. I ENJOY ENGLISH MORE THAN MATH, BUT ACCOUNTING IS EASY. EACH TEACHER HAS A REASON FOR IT (His view of what good writing is.)
NEVER FOUND THAT PART (the grammar and the English). NEVER MADE IT INTERESTING. LIKED GRADE 11.

In what class were you taught writing in your last year of high school?

GRADE 12 ENGLISH GENERAL SPRING 1985. ESSAY FORM WRITING. BIT OF BOTH WRITING AND READING; SHORT STORIES. TEACHER WOULD GIVE US A SENTENCE. I ALWAYS ENJOYED CREATIVE WRITING. TRIED 1/2 A SEMESTER OF GRADE 13 ENGLISH.

When did you take your last year of high school?

FINISHED IN JANUARY 1986

What advice do you best recall your teachers giving you personally about your writing?

PROBABLY: HAVE SOMEONE ELSE LOOK IT OVER BECAUSE THEY CAN LIKELY FIND ERRORS THAT YOU MISS. THINK ABOUT THINGS BEFORE YOU WRITE THEM.

How long does it take you to get to the college in the morning?   to go home at night?

20-25 MINUTE DRIVE, 1/2 HOUR AT RUSH HOUR.

Would you say you generally had a successful experience with writing in high school?   Tell me about it.

ALWAYS PASSED MY COURSES. NEVER FAILED. IN CREATIVE WRITING SOME TEACHERS COMMENTED ON MY STORIES. BUT NEVER IN THE TOP. PASS IN LOW 60S.

What do you think is the best feature of your writing?

I DON'T THINK THERE IS ANYTHING 'BEST'. NEEDS SOMETHING IN EVERY SECTION.

When you have to write a homework assignment -- an essay or report -- how do you do it?

USUALLY WAIT TILL THE LAST MINUTE, TRY TO GET HELP ON IDEAS FROM OTHERS OR BOOKS. TRY TO ELABORATE FROM THAT. USUALLY WHEN I DO CREATIVE WRITING I WILL REWRITE IT. (TESTS IN SCHOOL SHOWED I WAS A SLOW LEARNER (learning disabled?) YES. OFTEN FIND MIND WANDERING WHEN I'M NOT INTERESTED. HATED SCHOOL IN GRADE 11. TOOK EXTRA CREDITS 'CAUSE FRIENDS WERE THERE IN GRADES 12 AND I ENJOYED THAT. HAD A REALLY GOOD TEACHER.

What advice would you give to someone who wanted to know how to write better?

TRY TO FIND EITHER A STUDENT WHO DOES WELL IN WRITING OR A TEACHER. TEACHERS.... MUST KNOW MORE...GET HELP. (DON'T KNOW ENOUGH TO GIVE ADVICE)

Do you like to write?

I THINK I'D LIKE IT MORE IF I COULD DO IT BETTER. I'M HOPING IN THE NEXT YEAR I'LL BE ABLE TO DO IT.

Can you describe an instance in which you have found writing to be frustrating?

MANY. WRITING ASSIGNMENTS, TRYING TO FIND A WAY THAT THE TEACHER WOULD LIKE IT DONE. TRY TO FIND A WAY TO SAY IT WITHOUT REPEATING MYSELF. I'M A VERY SLOW READER SO IT'S HARD TO GET INFORMATION IN TIME.

What made it so?

Where and when do you do your best writing?

AT HOME IN THE EVENINGS. WHEN I'M ALONE AND CAN SIT AND THINK. IMPOSSIBLE TO DO WORK AT SCHOOL BUT COMFORTABLE AT HOME.

What kinds of things do you like to write?

CREATIVE WRITING. LAST YEAR OF PUBLIC SCHOOL ENJOYED CREATIVE WRITING. SHORT STORIES, LONG STORIES. JOURNALS (IN ENGLISH CLASS) ONE TEACHER ESPECIALLY LIKED -- ABOUT THREE MONTHS ON ONE STORY. (I'M AN OUTDOORS PERSON)

Do you revise the notes you make in class -- that is, do you rewrite them?

NO

When I say "This piece of writing needs revision" what do you think I mean?

IT NEEDS TO BE LOOKED AT AGAIN. WORDS CHANGED. SPELLING. MORE IDEAS ADDED TO CERTAIN SPOTS. LIKE THAT. SOME THINGS TAKEN OUT THAT WEREN'T NECESSARY.

Tell me what you do when you have to write an essay in class on a topic given to you by the teacher.

MY BEST. I TRY...TRY TO USE...WHAT I'D DO AT HOME AND TRY TO DO IT QUICKER, BUT I NEVER HAVE ENOUGH TIME TO REWRITE IT. TRY TO BUILD TOGETHER IN ONE STAB.

What kind of writing do you do? Do you write letters or postcards while travelling, for instance?

LETTERS SOMETIMES TO FRIENDS ONCE A MONTH OR SO. MORE IN WINTER MONTHS

Do you write because you need to at work or at home -- for instance, letters or instructions?

NO

Do you ever write stories or poems?

IN SCHOOL USED TO WRITE SONGS BUT STOPPED. THOUGHTS WALKING THE DOG, WRITE A BIT AFTER I GO HOME. THEY JUST WENT BACK INTO THE DRAWER.

As you can tell from the questions I have been asking you, we are interested in how you feel about writing. In summary, how would you describe yourself as a writer?

I WOULD SAY I'M A WEAK WRITER SKILLWISE. I FEEL I HAVE THE ABILITY TO DO GOOD WRITING IF I COULD LEARN WHAT WAS EXPECTED. SOMETIMES HARD TO PUT WHAT I MEAN IN MY HEAD ON PAPER.

---

general impressions
length
other comments

Interesting. This student talks in complete sentences (which I could rarely write fast enough to capture entirely), rarely hesitates, or when he does, doesn't use 'filler' language --

CHAPTER 8

A STATISTICAL PROFILE OF STUDENTS AND THEIR RESPONSES

The study's September, December, and March surveys yielded extensive data. The following pages present statistical profiles derived from these surveys.

The survey questionnaires, which are reproduced in Appendix A, were administered as follows:

	Survey 1	**Survey 2**	**Survey 3**
Date	September, 1986	December, 1986	March, 1987
Focus	entry profile of college students	end-of-semester review of word-processing	follow-up review of word-processing
Sample ize	649	406	53
Method	in-class	in-class	mail-out

As described in Chapter 6, the ten faculty involved in the study administered the September and December surveys in their classes. In September, 649 students completed the beginning-of-semester survey. In December, 466 completed the survey. However, the researchers further reduced this sample to 406 by excluding those students who, because of class transfers, late registration or other factors, had not been part of the September survey. Thus the December sample is a "matched" group which can be compared with confidence to the September sample.

The synopses on the following pages present comparative data for gender (September, December), educational background (September), speakers of English as a second language (September, December), and program affiliation (December).

The December and March surveys investigated use of and response to wordprocessing at two key times in the students' academic careers. To facilitate comparisons, selected questions were asked with precisely the same wording on both questionnaires. To assist the reader with cross-referencing end-of-semester and second-semester responses, corresponding December statistics are provided in the March, 1987 synopsis.

The statistical profile presented here is complemented by an anecdotal profile in Chapter 9, which presents comments that students made along with their responses to the questionnaires.

SYNOPSIS OF SURVEY ANSWERS, SEPTEMBER, 1986

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SURVEY QUESTIONS (Wording slightly abbreviated; Numbers indicate those which appear on Questionnaire)	ALL	GENDER		LAST ENGLISH			ESL	COMMENTS
		FEM	MALE	XII GEN	XII ADV	XIII		
	649	302	347	257	108	200	260	
	Responses are expressed as percentages of above sample sizes. Totals vary due to rounding-off.							
8 I RATE MY TYPING ABILITY AS:								
GOOD	20	35	8	19	21	22	21	Of the 1/3 who consider
FAIR	48	51	45	46	61	46	47	themselves poor typists,
POOR	31	13	47	35	18	31	32	3/4 are male.
9 THE LAST ENGLISH COURSE I TOOK WAS:								
GRADE XII GENERAL OR EQUIV.	40	46	34	100	0	0	44	60% of students
GRADE XII ADVANCED	17	17	17	0	100	0	15	completed Grade XII ADV
GRADE XIII	31	27	35	0	0	100	28	or higher English.
A SENECA ENGLISH COURSE	5	4	6	0	0	0	6	
ANOTHER COLLEGE/UNIV. COURSE	6	5	7	0	0	0	6	
10 I AM _____ WITH MICROCOMPUTERS:								
EXPERIENCED	12	9	15	9	13	14	6	About 1/2 of students have
FAMILIAR	38	35	41	33	48	38	40	some familiarity with
NOT FAMILIAR	50	56	44	58	39	48	54	microcomputers.
11 I HAVE USED A MICROCOMPUTER:								
AT SCHOOL	41	38	43	34	45	45	45	Microcomputer experience
AT HOME	14	9	18	12	16	14	7	was gained mainly at
AT WORK	4	4	3	3	5	3	4	school.
NO ANSWER	41	48	36	51	34	38	44	
12 AT HOME WE _____ A MICRO-COMPUTER:								Microcomputer ownership
HAVE	17	12	21	13	22	19	10	varies significantly
DON'T HAVE	83	88	79	87	78	81	90	among groups.
13 MY NATIVE LANGUAGE IS:								40% of students have a
ENGLISH	60	58	62	56	65	64	0	native language other
NOT ENGLISH	40	42	38	44	35	36	100	than English.
14 THE LANGUAGE I MOST OFTEN SPEAK AT HOME IS:								3/4 of students speak English at home, includ-
ENGLISH	74	72	76	74	76	77	44	ing 1/2 of non-native
NOT ENGLISH	26	28	24	26	24	23	56	speakers.
15 I THINK MY WRITING ADEQUATE FOR THE DEMANDS OF COLLEGE								
YES	74	71	76	68	81	79	67	Confidence level is
NO	26	29	24	32	19	21	33	high.

SYNOPSIS OF SURVEY ANSWERS, SEPTEMBER, 1986

SURVEY QUESTIONS (Wording slightly abbreviated; Numbers indicate those which appear on Questionnaire)		GENDER		LAST ENGLISH				
	ALL	FEM	MALE	XII GEN	XII ADV	XIII	ESL	COMMENTS
	649	302	347	257	108	200	260	
	Responses are expressed as percentages of above sample sizes. Totals vary due to rounding-off.							
16 I THINK MY WRITING ADEQUATE FOR THE DEMANDS OF WORK								
YES	76	76	76	74	81	81	72	High confidence level.
NO	24	24	24	26	19	19	28	
17 WRITING WILL PLAY AN IMPORTANT PART IN MY WORK AFTER COLLEGE								A high percentage of
YES	75	77	73	77	73	73	82	students see writing as
NO	25	23	27	23	27	27	18	important.
18 I WILL LIKELY HAVE TO USE A COMPUTER TO WRITE WHEN I GO TO WORK								
YES	59	60	57	61	65	51	62	60% of students foresee
NO	41	40	43	39	35	49	38	computer use at work.
19 WHEN I REVISE MY WRITING, I MAKE MAJOR CHANGES								
YES	41	43	40	41	47	37	46	
NO	59	57	60	59	53	63	54	
20 WHEN I REVISE MY WRITING, I MAKE MINOR CHANGES								
YES	72	68	75	74	66	75	63	
NO	28	32	25	26	34	25	37	
21 I AM CONFIDENT ABOUT MY WRITING								
YES	46	44	48	43	42	55	40	Note discrepancy with
NO	54	56	52	57	58	45	60	questions 15 and 16.
22 I WRITE ONE PAGE OR LESS A WEEK								
YES	42	44	40	43	40	39	47	
NO	58	56	60	57	60	61	53	
23 I WRITE MORE THAN ONE PAGE A WEEK								
YES	50	44	54	46	51	54	43	
NO	50	56	46	54	49	46	57	

SYNOPSIS OF SURVEY ANSWERS, SEPTEMBER, 1986

SURVEY QUESTIONS (Wording slightly abbreviated; Numbers indicate those which appear on Questionnaire)		GENDER		LAST ENGLISH				COMMENTS
	ALL	FEM	MALE	XII GEN	XII ADV	XIII	ESL	
	649	302	347	257	108	200	260	
	Responses are expressed as percentages of above sample sizes. Totals vary due to rounding-off.							
24 AT HOME MY FAMILY OFTEN WRITE LETTERS								
YES	48	53	43	50	39	52	50	
NO	52	47	57	50	61	48	50	
25 AT HOME MY FAMILY SELDOM WRITE ANYTHING								
YES	34	30	37	33	36	31	35	
NO	66	70	63	67	64	69	65	
26 I CAN WRITE WELL IN A TEST SITUATION								
YES	44	41	48	43	46	47	42	
NO	56	59	52	57	54	53	58	
27 I ENJOY WRITING								
YES	53	64	44	58	46	50	48	Important for attitude
NO	47	36	56	42	54	50	52	measure.
28 I LIKE TO WRITE WITH PEOPLE AROUND ME								
YES	27	25	27	24	31	26	25	
NO	74	75	73	76	69	74	75	
29 I LIKE TO WRITE ALONE								
YES	84	85	83	86	82	84	83	Strong preference for
NO	16	15	17	14	18	16	17	writing alone.
30 WHEN I WRITE, I LIKE TO GET HELP FROM:								
MY FAMILY	12	14	11	13	11	12	7	Note relation to
A FRIEND	32	37	28	29	36	35	39	question 32 - best
A TEACHER	32	30	34	35	31	30	36	source of advice.
NO ONE	23	19	26	22	21	22	17	
NO ANSWER	1	1	1	1	1	1	0	
31 I DO MY BEST WRITING								
AT HOME	30	84	76	79	88	81	85	Strong preference for
AT ACHOOL	19	15	22	20	11	18	14	writing at home.
NO ANSWER	1	1	1	1	1	1	1	

SYNOPSIS OF SURVEY ANSWERS, SEPTEMBER, 1986

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SURVEY QUESTIONS (Wording slightly abbreviated; Numbers indicate those which appear on Questionnaire)	ALL	GENDER FEM	GENDER MALE	LAST ENGLISH XII GEN	LAST ENGLISH XII ADV	LAST ENGLISH XIII	ESL	COMMENTS
	649	302	347	[illegible]	[illegible]	[illegible]	260	
	Responses are expressed as percentages of above sample sizes. Totals vary due to rounding-off.							
32 THE BEST ADVICE I EVER GOT ABOUT WRITING CAME FROM								
A MEMBER OF MY FAMILY	9	7	10	9	8	8	6	Note relation to question 30 - preferred source of help.
A FRIEND	11	12	10	10	10	12	15	
A TEACHER	74	75	73	75	76	74	75	
A BOOK	5	5	6	5	5	6	4	
NO ANSWER	1	1	1	1	1	0	0	
33 WHEN I AM PREPARING TO WRITE I								
PLAN MENTALLY	35	33	38	34	39		35	
MAKE NOTES IN VARIOUS FORMS	23	26	21	23	18		23	
MAKE AN OUTLINE	29	29	28	27	32		28	
START WRITING ASAP	12	12	13	16	11		13	
34 WHEN I WRITE I PREFER TO								
DO A DRAFT TO BE CHANGED	87	92	82	86	86		87	
DO THE FINAL VERSION IMMED.	13	8	18	14	14		12	
35 THE TYPE OF WRITING WHICH I FIND MOST ENJOYABLE IS:								
LETTERS TO FRIENDS/FAMILY	41	53	31	43	38		42	
WRITING FOR MYSELF	20	18	22	20	22		19	
SCHOOL ASSIGNMENTS	11	6	15	10	12		9	
ALL OF THE ABOVE	14	17	12	16	13		15	
NONE OF THE ABOVE	13	6	20	11	15		15	
36 THE TYPE OF WRITING WHICH I FIND LEAST ENJOYABLE IS:								
LETTERS TO FRIENDS/FAMILY	9	3	14	8	9		10	
CREATIVE WRITING	29	32	27	26	27		30	
SCHOOL ASSIGNMENTS	40	45	36	41	43		35	
ALL OF THE ABOVE	4	2	6	6	3		7	
NONE OF THE ABOVE	18	18	18	19	18		18	
37 OVERALL, I CONSIDER MY WRITING TO BE								
VERY GOOD	3	2	5	2	3		2	
GOOD	22	22	23	18	29		17	
AVERAGE	61	68	55	66	62		64	
BELOW AVERAGE	12	7	15	12	5		15	
WELL BELOW AVERAGE	2	1	2	2	1		2	

SYNOPSIS OF SURVEY ANSWERS, DECEMBER, 1986

SURVEY QUESTIONS	ALL	GENDER		BY ACADEMIC DIVISION					ESL	MARCH SAMPLE	COMMENTS
		FEM	MALE	APPL. ARTS	BUSINESS	COMPUTER	OFFICE ADMIN	TECHNOLOGY			
(Wording slightly abbreviated)	406	189	217	57	81	36	49	149	151	53	
RESPONSES EXPRESSED AS PERCENTAGES											
1 THIS SEMESTER I HAVE USED WORDPROCESSING FOR:											
ENGLISH ASSIGNMENTS	94	93	95	91	91	94	94	98	92	98	High usage
OTHER SUBJECTS	35	32	37	30	44	83	31	19	44	47	Computer high
PERSONAL WRITING	24	21	27	28	28	56	14	19	24	32	Computer high
FUN	20	15	24	23	22	31	18	19	19	25	m/f difference
2 NEXT SEMESTER I EXPECT TO USE WORDPROCESSING FOR:											
MOST ENGL. ASSIGNMENTS	59	67	51	58	62	86	61	46	67	71	Computer high
MAJOR ENGL. ASS'NMENTS	60	66	54	61	77	83	69	42	66	70	wide range
OTHER SUBJECTS	62	62	62	51	69	86	67	54	67	68	Computer high
PERSONAL WRITING	32	28	35	23	36	61	33	28	31	38	Computer high
FUN	20	17	23	18	23	31	22	19	24	21	
3 MY FAMILY HAS A MICRO AT HOME	25	19	30	18	23	36	16	30	21	26	wide range
4 I THINK MY WRITING IS ADEQUATE FOR THE DEMANDS OF COLLEGE	77	70	82	54	79	78	78	83	64	81	wide range; ESL below average:
5 I AM CONFIDENT IN MY WRITING	66	59	72	56	73	64	51	75	60	74	ESL near average
6 I ENJOY WRITING	60	67	54	68	54	69	65	55	54	51	fairly consistent:
7 I ENJOY WRITING WITH A MICRO	68	72	64	56	65	86	78	68	68	68	Computer high
8 I THINK MY WRITING IS ADEQUATE FOR THE DEMANDS OF WORK	80	79	80	75	83	78	84	80	70	85	fairly consistent: ESL below average:
9 WHEN I AM PREPARING TO WRITE I PREFER TO:											
START WRITING	9	10	9	12	5	14	14	8	10	13	Results for this
THINK/PLAN IN MY HEAD	16	11	19	11	15	14	12	19	12	11	question show
MAKE SOME NOTES	26	25	27	25	32	17	6	30	23	38	idealized view
MAKE A COMPLETE PLAN	49	53	45	53	48	56	65	42	55	38	of own writing.
NO ANS	0	1	0	0	0	0	2	0	1	0	
10 THIS SEMESTER I USED WP FOR:											
1-10 HOURS	34	43	26	51	36	11	49	23	34	23	Computer Studies
11-20 HOURS	33	28	38	30	32	42	18	39	33	40	students report
21-30 HOURS	18	16	20	12	16	31	16	21	15	19	much greater
30+ HOURS	13	10	16	2	16	17	14	15	15	17	usage.
NO ANSWER	2	3	1	5	0	0	2	1	2	2	
11 TO LEARN TO USE WP TAKES:											
LESS THAN 10 HOURS	74	75	73	68	73	83	73	76	73	83	All groups lear-
11-20 HOURS	19	15	22	19	20	8	20	20	19	11	ned quickly;
21-30 HOURS	4	5	3	7	5	6	4	3	6	4	March group
MORE THAN 30 HOURS	2	3	1	2	2	3	0	1	1	2	quicker than
NO ANSWER	1	2	0	4	0	0	2	1	1	0	average.

SYNOPSIS OF SURVEY ANSWERS, DECEMBER, 1986

SURVEY QUESTIONS	ALL	GENDER		BY ACADEMIC DIVISION					ESL	MARCH SAMPLE	COMMENTS
		FEM	MALE	APPL. ARTS	BUSINESS	COMPUTER	OFFICE ADMIN	TECHNOLOGY			
(Wording slightly abbreviated)	406	189	217	57	81	36	49	149	151	53	
RESPONSES EXPRESSED AS PERCENTAGES											
12 I RATE MY TYPING ABILITY AS											
GOOD	39	59	21	37	36	56	76	22	40	43	Significant male/
ADEQUATE	39	31	46	51	35	39	20	44	35	47	female difference
POOR	21	8	33	12	30	6	2	33	24	9	
NO ANSWER	1	1	0	0	0	0	2	1	1	0	
13 LEARNING TO USE A MICROCOMPUTER FOR WRITING IS											
VERY EASY	22	24	21	12	20	47	31	20	20	42	At least 87% re-
EASY	65	62	67	65	68	53	55	70	68	55	port learning is
DIFFICULT	11	12	11	21	11	0	12	9	11	4	Easy/Very Easy
VERY DIFFICULT	1	0	1	0	1	0	0	1	1	0	in all groups.
NO ANSWER	1	2	0	2	0	0	2	0	1	0	
14 I FOUND THE ACCESS TO MICROS AND PRINTERS TO BE											
VERY GOOD	16	15	17	14	19	19	20	13	21	23	Access was dif-
GOOD	65	66	63	68	60	61	59	68	62	60	ficult for 15-
DIFFICULT	15	13	17	12	17	17	12	17	13	17	20% of all groups
VERY DIFFICULT	3	3	3	0	4	3	4	2	3	0	
NO ANSWER	1	3	0	5	0	0	4	0	2	0	
15 COMPOSING ON A MICRO IS											40-60% called
ENJOYABLE	48	49	47	39	51	64	61	44	51	57	process "enjoy-
ABOUT THE SAME AS WRITING	35	36	33	42	35	28	24	36	31	34	able"; 10-20%
FRUSTRATING	16	13	19	18	14	8	10	20	17	9	experienced frus-
NO ANSWER	1	2	0	2	1	0	4	0	1	0	tration.
16 I USUALLY											
WRITE WITH PEN AND PAPER	61	65	58	77	65	36	71	54	66	45	Responses vary
TYPE	3	5	2	4	4	0	12	2	3	4	considerably
USE A MICROCOMPUTER	5	2	9	0	7	17	0	6	3	8	among groups.
USE PAPER THEN A MICRO	29	27	31	19	23	47	12	37	26	43	
NO ANSWER	1	1	0	0	0	0	4	1	1	0	
17 WHEN THEY WRITE WITH A WP, STUDENTS HELP EACH OTHER											
MORE	62	62	62	60	62	53	65	64	55	60	Significant in-
AS OFTEN	24	21	26	25	26	31	16	21	29	30	crease in help
LESS	12	14	11	12	12	14	12	13	14	9	levels among
NO ANSWER	2	3	1	4	0	3	6	2	2	0	all groups.
18 WP WRITER											
VERY WORTHWHILE	28	31	26	32	26	36	35	19	30	30	86% call exper-
WORTHWHILE	58	58	58	53	60	50	53	64	56	60	ience Worthwhile
NOT WORTHWHILE	10	8	12	14	11	14	6	9	10	8	to V. Worthwhile.
A WASTE OF TIME	3	2	4	0	2	0	2	7	3	2	Some variation
NO ANSWER	1	2	0	2	0	0	4	1	1	0	among groups.

SYNOPSIS OF SURVEY ANSWERS, DECEMBER, 1986

SURVEY QUESTIONS (Wording slightly abbreviated)	ALL	GENDER FEM	GENDER MALE	BY ACADEMIC DIVISION APPL. ARTS	BUSINESS	COMPUTER	OFFICE ADMIN	TECHNOLOGY	ESL	MARCH SAMPLE	COMMENTS
	406	189	217	57	61	36	49	149	151	53	
	RESPONSES EXPRESSED AS PERCENTAGES										
19 FOR MY CAREER, TIME SPENT ON WP WAS											
VERY WORTHWHILE	35	41	30	23	36	61	57	26	41	47	90% call exper-
WORTHWHILE	55	50	59	61	59	39	35	60	45	51	ience Worthwhile
NOT WORTHWHILE	7	7	7	14	2	0	4	9	9	2	to V. Worthwhile.
A WASTE OF TIME	2	1	3	0	2	0	0	4	1	0	Notable varia-
NO ANSWER	1	2	1	2	0	0	4	1	1	0	tion among groups:
20 TO USE WP EFFECTIVELY, STUDENTS NEED:											
A. GOOD TYPING SKILLS											
STRONGLY DISAGREE	5	6	5	4	9	0	2	7	6	2	60% see typing
DISAGREE	21	20	22	14	22	11	22	26	23	28	skills as rele-
NO OPINION	13	14	12	18	19	14	10	11	14	9	vant; 40% dis-
AGREE	46	47	44	47	38	50	47	44	41	47	agree or have
STRONGLY AGREE	15	13	17	16	12	25	[illegible]	13	15	13	no opinion.
NO ANSWER	0	1	0	2	0	0	[illegible]	0	1	0	No consensus.
B. TECHNICAL ABILITIES											
STRONGLY DISAGREE	9	8	10	2	15	11	4	9	10	8	No consensus.
DISAGREE	34	32	35	[illegible]	31	[illegible]	20	40	33	26	
NO OPINION	23	25	22	30	25	25	24	15	23	25	
AGREE	30	29	31	[illegible]	23	[illegible]	39	34	26	34	
STRONGLY AGREE	4	5	3	7	6	0	10	2	7	6	
NO ANSWER	0	1	0	2	0	0	2	0	0	0	
C. INTEREST IN WRITING											
STRONGLY DISAGREE	6	6	[illegible]	0	7	6	12	6	8	9	No consensus.
DISAGREE	23	24	23	19	25	17	14	28	23	19	
NO OPINION	20	19	20	21	26	11	22	17	21	15	
AGREE	40	37	42	39	35	47	33	41	33	40	
STRONGLY AGREE	11	13	10	21	7	19	14	8	15	[illegible]	
NO ANSWER	0	1	0	0	0	0	4	0	0	0	
D. GOOD WRITING SKILLS											
STRONGLY DISAGREE	5	4	5	0	6	0	2	7	4	8	No consensus.
DISAGREE	30	29	31	26	36	22	31	32	30	32	
NO OPINION	21	24	19	26	16	36	22	17	25	25	
AGREE	35	30	39	35	36	36	27	36	28	28	
STRONGLY AGREE	9	12	6	11	5	6	18	8	13	8	
NO ANSWER	0	1	0	2	0	0	0	0	0	0	

SYNOPSIS OF SURVEY ANSWERS, DECEMBER, 1986

SURVEY QUESTIONS	ALL	GENDER		BY ACADEMIC DIVISION					ESL	MARCH SAMPLE	COMMENTS
		FEM	MALE	APPL. ARTS	BUSINESS	COMPUTER	OFFICE ADMIN	TECHNOLOGY			
(Wording slightly abbreviated)	406	189	217	57	81	36	49	149	151	53	
RESPONSES EXPRESSED AS PERCENTAGES											
20 (CONT) TO USE WP EFFECTIVELY, STUDENTS NEED											
E. WEEKLY INSTRUCTION/PRACTICE											No consensus.
STRONGLY DISAGREE	6	5	7	0	10	6	4	9	5	8	About half of
DISAGREE	23	21	24	21	28	19	14	28	16	40	the students
NO OPINION	20	24	17	30	16	25	24	15	23	9	consider weekly
AGREE	35	35	35	37	30	36	43	32	38	30	instruction and
STRONGLY AGREE	12	12	12	9	14	14	14	12	15	9	practice impor-
NO ANSWER	4	3	4	2	2	0	0	5	3	4	tant.
F. REGULAR ACCESS TO EXPERTISE											
STRONGLY DISAGREE	8	7	8	5	11	14	4	7	5	17	No consensus.
DISAGREE	21	21	22	18	22	31	20	21	16	26	Almost half of
NO OPINION	22	24	20	19	22	25	16	23	31	19	the students
AGREE	34	30	36	37	33	14	31	40	30	25	consider access
STRONGLY AGREE	13	14	12	16	10	17	22	9	15	13	to expertise
NO ANSWER	2	3	2	5	1	0	6	0	3	0	important.
21 FOR COLLEGE STUDENTS, WP IS VALUABLE FOR:											
A. PLANNING & GETTING STARTED											
VERY POOR	12	11	13	11	7	19	4	17	11	15	No consensus.
NOT USEFUL	19	21	17	19	17	14	18	22	11	15	
SOMEWHAT USEFUL	29	30	29	33	30	31	20	31	33	28	
USEFUL	24	21	26	23	26	22	31	17	21	23	
VERY USEFUL	13	13	12	11	16	11	18	10	19	19	
NO ANSWER	3	4	3	4	4	3	8	3	5	0	
B. IMPROVING SPELLING											
VERY POOR	9	7	10	11	12	6	8	9	11	4	note: data base
NOT USEFUL	15	15	14	16	17	8	8	15	11	13	calculation prob-
SOMEWHAT USEFUL	21	26	17	26	21	8	35	16	23	19	lem for this
USEFUL	34	26	40	30	31	42	20	38	33	40	item only; up to
VERY USEFUL	20	23	18	16	16	33	22	21	19	25	3% error in
NO ANSWER	1	1	0	2	0	0	2	0	0	0	totals.
C. REDUCING NUMBER OF ERRORS											
VERY POOR	4	4	4	7	5	0	4	4	5	2	Very positive
NOT USEFUL	6	6	6	7	7	3	4	7	5	4	response.
SOMEWHAT USEFUL	15	16	14	18	14	11	16	12	13	11	
USEFUL	34	30	38	30	30	33	31	36	30	32	
VERY USEFUL	39	41	37	35	41	50	41	40	41	51	
NO ANSWER	2	3	2	4	4	3	4	1	5	0	

SYNOPSIS OF SURVEY ANSWERS, DECEMBER, 1986

SURVEY QUESTIONS	ALL	GENDER		BY ACADEMIC DIVISION					ESL	MARCH SAMPLE	COMMENTS
		FEM	MALE	APPL. ARTS	BUSINESS	COMPUTER	OFFICE ADMIN	TECHNOLOGY			
(Wording slightly abbreviated)	406	189	217	57	81	36	49	149	151	53	
RESPONSES EXPRESSED AS PERCENTAGES											
WP IS VALUABLE FOR:											
D. ORGANIZING MORE EFFECTIVELY											
VERY POOR	3	4	2	2	2	3	2	5	5	4	Very positive
NOT USEFUL	9	7	11	12	5	14	6	11	7	9	response.
SOMEWHAT USEFUL	21	22	19	14	19	11	14	25	19	21	
USEFUL	38	34	42	37	44	31	39	35	31	40	
VERY USEFUL	27	30	24	33	27	36	35	24	34	25	
NO ANSWER	2	3	2	2	2	6	4	1	4	2	
E. EDITING/REVISING MORE EASILY											
VERY POOR	2	1	2	0	0	0	2	4	1	0	Extremely posi-
NOT USEFUL	2	2	2	2	4	0	2	1	1	0	tive response.
SOMEWHAT USEFUL	8	11	6	12	6	3	12	3	9	4	
USEFUL	30	29	31	28	28	19	29	36	28	28	
VERY USEFUL	56	55	57	54	58	75	51	54	55	68	
NO ANSWER	2	3	2	4	4	3	4	1	5	0	
F. PRODUCING NEAT ATTRACTIVE WORK											
VERY POOR	1	1	1	0	0	0	2	3	1	0	Extremely posi-
NOT USEFUL	2	1	2	4	2	3	0	1	2	2	tive response.
SOMEWHAT USEFUL	5	7	3	9	2	0	2	4	3	4	
USEFUL	23	23	22	23	19	22	24	22	21	15	
VERY USEFUL	67	66	68	63	73	72	67	68	68	79	
NO ANSWER	2	2	3	2	4	3	4	1	5	0	
G. GENERALLY IMPROVING WRITING											
VERY POOR	5	5	5	2	5	6	4	7	7	2	Positive, but
NOT USEFUL	9	7	11	11	9	8	2	12	7	4	difficult to
SOMEWHAT USEFUL	32	37	28	39	37	19	39	26	30	34	interpret since
USEFUL	34	27	41	26	35	47	24	38	32	36	1/3 of students
VERY USEFUL	16	20	13	18	11	17	24	16	17	25	circled "3" on a
NO ANSWER	4	4	3	5	4	3	6	1	7	0	"1-5" scale.
H. INCREASING ENJOYMENT OF WRITING											
VERY POOR	8	7	8	7	6	3	4	12	7	4	About 20% see
NOT USEFUL	14	12	16	19	17	8	4	17	11	9	little value;
SOMEWHAT USEFUL	27	23	31	18	27	33	24	31	23	30	others see some
USEFUL	30	30	29	26	30	25	35	29	29	34	to considerable
VERY USEFUL	17	22	13	23	17	25	29	9	24	21	value.
NO ANSWER	4	5	3	7	2	6	4	2	5	2	
I. INCREASING CONFIDENCE IN WRITING											
VERY POOR	6	6	5	7	5	3	4	9	6	6	80% see some
NOT USEFUL	11	7	15	5	16	6	2	15	7	9	to considerable
SOMEWHAT USEFUL	30	28	32	25	28	39	37	31	23	34	value.
USEFUL	33	32	34	37	33	28	33	32	36	26	Less than 20%
VERY USEFUL	17	22	12	19	15	22	20	13	20	25	see little value.
NO ANSWER	3	5	2	7	2	3	4	1	6	0	

SYNOPSIS OF SURVEY ANSWERS, MARCH, 1987

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SURVEY QUESTIONS (Wording slightly abbreviated; numbers indicate those which appear on questionnaire)	MARCH 1987 SURVEY N=53	DECEMBER 1986 SURVEY N=406	COMMENTS
6 THIS SEMESTER I HAVE USED WORDPROCESSING FOR:			50% still use WP for English assignments
ENGLISH ASSIGNMENTS	51%	94%	although many take no
OTHER SUBJECTS	51	35	English in semester 2.
PERSONAL WRITING	47	24	Significant increase
FUN	23	20	in use for other subjects.
7 NEXT YEAR I EXPECT TO USE WORDPROCESSING FOR:			
MOST ENGL. ASSIGNMENTS	66	N/A	Projected use strong in
MAJOR ENGL. ASS'NMENTS	79	N/A	English and particularly
OTHER SUBJECTS	89	N/A	strong for other subjects.
PERSONAL WRITING	60	N/A	
FUN	25	N/A	
FOR COLLEGE STUDENTS, WP IS VALUABLE FOR:			
8 PLANNING & GETTING STARTED			
VERY POOR	15	12	Results consistent
NOT USEFUL	19	19	December to March.
SOMEWHAT USEFUL	26	29	
USEFUL	23	24	
VERY USEFUL	17	13	
NO ANSWER		4	
9 IMPROVING SPELLING			
VERY POOR	4	9	Decline in perceived
NOT USEFUL	11	14	value with respect to
SOMEWHAT USEFUL	19	21	spelling.
USEFUL	30	34	
VERY USEFUL	36	20	
10 REDUCING NUMBER OF ERRORS			
VERY POOR	0	4	March sample very
NOT USEFUL	0	6	enthusiastic about value
SOMEWHAT USEFUL	15	15	for error reduction.
USEFUL	23	34	
VERY USEFUL	62	39	
NO ANSWER	0	2	

Note: December data are included for comparative purposes.
N/A indicates question was not part of the December survey.

SYNOPSIS OF SURVEY ANSWERS, MARCH, 1987

SURVEY QUESTIONS (Wording slightly abbreviated: numbers indicate those which appear on questionnaire)	MARCH 1987 SURVEY N=53	DECEMBER 1986 SURVEY N=406	COMMENTS
FOR COLLEGE STUDENTS, WP IS VALUABLE FOR:			
11 ORGANIZING MORE EFFECTIVELY			
VERY POOR	0%	3%	March sample very
NOT USEFUL	2	9	enthusiastic about value
SOMEWHAT USEFUL	16	20	for organizing.
USEFUL	33	38	
VERY USEFUL	49	27	
NO ANSWER	0	2	
12 EDITING/REVISING MORE EASILY			
VERY POOR	2	1	March sample very
NOT USEFUL	0	2	enthusiastic about value
SOMEWHAT USEFUL	0	8	for editing/revising.
USEFUL	19	30	
VERY USEFUL	79	56	
NO ANSWER	0	2	
13 PRODUCING NEAT ATTRACTIVE WORK			
VERY POOR	0	1	March and December
NOT USEFUL	0	2	samples both see sig-
SOMEWHAT USEFUL	8	5	nificant value for
USEFUL	15	22	appearance of work.
VERY USEFUL	77	67	
NO ANSWER	0	2	
14 GENERALLY IMPROVING WRITING			
VERY POOR	4	5	Responses fairly
NOT USEFUL	4	9	similar in the two
SOMEWHAT USEFUL	33	32	surveys.
USEFUL	33	34	
VERY USEFUL	26	16	
NO ANSWER		3	
15 INCREASING ENJOYMENT OF WRITING			
VERY POOR	8	7	90% of March sample
NOT USEFUL	2	14	see WP value as
SOMEWHAT USEFUL	30	27	"somewhat useful" to
USEFUL	32	30	"very useful" for
VERY USEFUL	28	17	enjoyment of writing.
NO ANSWER	0	4	

Note: December data are included for comparative purposes.
N/A indicates question was not part of the December survey.

SYNOPSIS OF SURVEY ANSWERS, MARCH, 1987

SURVEY QUESTIONS (Wording slightly abbreviated; numbers indicate those which appear on questionnaire)	MARCH 1987 SURVEY N=53	DECEMBER 1986 SURVEY N=406	COMMENTS
16 INCREASING CONFIDENCE IN WRITING			
VERY POOR	4%	6%	90% of March sample see WP value as "somewhat useful" to "very useful" for increasing confidence.
NOT USEFUL	4	11	
SOMEWHAT USEFUL	32	30	
USEFUL	30	33	
VERY USEFUL	30	17	
NO ANSWER	0	3	
17 THIS SEMESTER MY WRITING			
IMPROVED CONSIDERABLY	25	N/A	Most students in March sample felt their writing continued to improve in the second semester.
IMPROVED SLIGHTLY	45	N/A	
REMAINED ABOUT THE SAME	26	N/A	
DETERIORATED SLIGHTLY	0	N/A	
DETERIORATED CONSIDERABLY	4	N/A	
18 THIS SEMESTER MY SKILL WITH WP			
IMPROVED CONSIDERABLY	30	N/A	Most students in March sample felt their WP skill improved during the second semester.
IMPROVED SLIGHTLY	42	N/A	
REMAINED ABOUT THE SAME	26	N/A	
DETERIORATED SLIGHTLY	2	N/A	
DETERIORATED CONSIDERABLY	0	N/A	
19 THIS SEMESTER SKILL WITH WP HAS PROVEN TO BE			
MORE USEFUL THAN I EXPECTED	38	N/A	WP value met or exceeded expectations for most students in second semester.
AS USEFUL AS I EXPECTED	55	N/A	
LESS USEFUL THAN I EXPECTED	7	N/A	
20 THIS SEMESTER I USED WP FOR:			
1-10 HOURS	42	34	Responses fairly similar in the two surveys.
11-20 HOURS	32	33	
21-30 HOURS	15	18	
30+ HOURS	11	13	
NO ANSWER		2	
21 COMPOSING ON A MICRO IS			
ENJOYABLE	72	48	March sample consists primarily of students who are enthusiastic about use of WP.
ABOUT THE SAME AS WRITING	25	34	
FRUSTRATING	4	16	
NO ANSWER		1	

Note: December data are included for comparative purposes.
N/A indicates question was not part of the December survey.

SYNOPSIS OF SURVEY ANSWERS, MARCH, 1987

SURVEY QUESTIONS (Wording slightly abbreviated; numbers indicate those which appear on questionnaire)	MARCH 1987 SURVEY N=53	DECEMBER 1986 SURVEY N=406	COMMENTS
22 I PREFER TO			Response to this question
WRITE BY HAND	2%	61%	showed the greatest
TYPE	4	3	December/March difference.
USE A MICROCOMPUTER	36	5	Could be interpretec as
USE PAPER THEN A MICRO	59	29	shift in preferences or as
NO ANSWER		1	sample bias in March.
23 FOR MY DEVELOPMENT AS A WRITER, WORDPROCESSING HAS BEEN			Responses fairly similar
VERY WORTHWHILE	32	28	in the two surveys.
WORTHWHILE	62	58	Approximately 90% see WP
NOT WORTHWHILE	6	10	as "worthwhile" or "very
A WASTE OF TIME	0	3	"worthwhile" for develop-
NO ANSWER		1	ment of writing.
24 FOR MY CAREER, TIME SPENT ON WP HAS BEEN			
VERY WORTHWHILE	58	35	Almost all students see
WORTHWHILE	36	54	WP as relevant to
NOT WORTHWHILE	6	7	career preparation.
A WASTE OF TIME	0	2	
NO ANSWER		1	
25 NEXT YEAR I EXPECT TO USE WP			
FREQUENTLY	62	N/A	
OCCASIONALLY	36	N/A	
NEVER	2	N/A	
26 TO USE WP EFFECTIVELY, STUDENTS NEED:			
A. GOOD TYPING SKILLS			
STRONGLY DISAGREE	6	5	No consensus in
DISAGREE	32	21	either survey sample,
NO OPINION	19	13	though 43% say
AGREE	19	45	typing is important.
STRONGLY AGREE	24	15	

Note: December data are includec for comparative purposes.
N/A indicates question was not part of the December survey.

SYNOPSIS OF SURVEY ANSWERS, MARCH, 1987

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SURVEY QUESTIONS (Wording slightly abbreviated; numbers indicate those which appear on questionnaire)	MARCH 1987 SURVEY N=53	DECEMBER 1986 SURVEY N=406	COMMENTS
26 TO USE WP EFFECTIVELY, STUDENTS NEED:			
B. TECHNICAL ABILITIES			
STRONGLY DISAGREE	17%	9%	No consensus in either survey sample.
DISAGREE	30	34	
NO OPINION	15	23	
AGREE	28	30	
STRONGLY AGREE	10	4	
C. INTEREST IN WRITING			
STRONGLY DISAGREE	4	6	No consensus in either survey sample.
DISAGREE	26	23	
NO OPINION	19	19	
AGREE	42	40	
STRONGLY AGREE	9	11	
D. GOOD WRITING SKILLS			
STRONGLY DISAGREE	13	4	No consensus in either survey sample.
DISAGREE	24	30	
NO OPINION	34	21	
AGREE	23	35	
STRONGLY AGREE	6	9	
E. WEEKLY INSTRUCTION/PRACTICE			
STRONGLY DISAGREE	15	6	Widely varied responses may reflect different confidence levels.
DISAGREE	22	23	
NO OPINION	22	20	
AGREE	29	35	
STRONGLY AGREE	12	12	
NO ANSWER		3	
F. REGULAR ACCESS TO EXPERTISE			
STRONGLY DISAGREE	9	8	Widely varied responses may reflect different confidence levels.
DISAGREE	25	21	
NO OPINION	25	22	
AGREE	30	34	
STRONGLY AGREE	11	13	
NO ANSWER		2	

Note: December data are included for comparative purposes.
N/A indicates question was not part of the December survey.

CHAPTER 9

AN ANECDOTAL PROFILE OF STUDENTS AND THEIR RESPONSES

Chapter 6 presented a statistical profile of student use of wordprocessing. That profile was derived from students' checkmark responses to questions on the December and March surveys.

This chapter presents student comments which both complement and flesh out the statistical synopsis. The student comments were solicited at the end of the surveys by the following question:

> IN SUMMARY, HOW HAS WORDPROCESSING AFFECTED YOUR WRITING HABITS OR YOUR ATTITUDE TO WRITING?

The responses form an anecdotal profile of student reactions to wordprocessing.

As expected, the comments were varied. Some students offered a broad perspective, summarizing the value of wordprocessing for their development as writers. Most of their comments are very positive, reflecting the data presented in Chapter 8.

Others reacted more literally to the question, specifying effects on writing habits and attitudes. The comments on habits are particularly interesting. The word "habits" was chosen purposefully, to avoid a more formal and possibly forbidding request for perspective on "the writing process". Students seem to have reacted using their own words, and the result gives insight into their conceptualization of the writing process and its challenges. In addition, the wording of the remarks and the frequent mention of confidence and attitude indicate the emphasis students place on the value of wordprocessing.

Still others took the opportunity to express general or specific enthusiasms or frustrations. It is interesting to read through these remarks with two keys in mind: time and effort. Enthusiastic students remark that wordprocessing makes additional effort (e.g. revision) more worthwhile by reducing the time required. Frustrated students find that the time spent dealing with the keyboard and with technical problems renders the effort too great for the rewards.

In December, when 406 students completed the end-of-semester survey, approximately two-thirds offered summary comments. The 41 comments printed below represent this December response. They come from 60 students registered in three representative classes. The student comments are not sorted by viewpoint or theme;

instead they appear as class sets showing a range of reactions to a shared curriculum. Misspellings have been corrected; otherwise, the comments are unedited.

In March, when 53 students responded to the follow-up survey which was mailed to them, 52 offered summary comments. These are printed on the following pages without selection or sorting, again to provide an unedited anecdotal profile of responses. Once again, misspellings have been eliminated; otherwise, the comments appear verbatim.

DECEMBER COMMENTS

Class A

1. I find I like to write more because I don't have to rewrite my essay for my clean copy, errrors are vey easily corrected, you can leave and come back to your essay because you can save it on a disk.

2. Yes it has improved my writing skills and I like to work on the computers because it is easy to correct your errors.

3. If computers (especially the older models) were maintained properly, it would stop the vicious rumour of computers being faulty pieces of circuitry. Fix the bloody things, would ya! Do us all a favour.

4. It has helped me to read and edit better than writing with ink or even on a typewriter.

5. The wordprocessing makes writing more enjoyable and much neater. The work allows my writing to become error free.

6. I have a computer at home so I have some experience with wordprocessors and although it doesn't generally improve my writing skills, it just makes it more enjoyable.

7. Since it takes a longer time to type than writing, I have more time to think about what I'm typing.

8. I think I am more effective in writing than before.

9. I strongly feel that wordprocessing is a good thing. It enables students to work efficiently and error free, on the other hand if a study is inexperienced it could be very difficult and confusing.

10. My attitude towards writing has changed somewhat for the better from wordprocessing. It has given me an ability to increase my writing habits. It made writing an enjoyable pasttime.

11. It has not affected my writing habits or my attitudes towards writing.

12. As far as WordStar is concerned it only made me frustrated. I can write an eight page essay in half the time than if I used one of the school's so-called computers. Either they never worked or else it was impossible to get respectable amounts of time on it.

13. Yes! I am now able to run SpellStar through the program to see if any errors were present. In the past my major drawback

was spelling. By using the WordStar/SpellStar it helped me for correcting my spelling errors.

14. I was a fairly good writer to begin with, but WordStar helped my spelling and proofreading.

15. My working on the WordStar was not worth the effort to get to the computer room.

16. By the use of a wordprocessor I've learned quite a bit about locating my most common spelling errors and correcting them. It also has helped me with improving my essay formation and also provides a basic understanding to the great world of computers.

17. It has enabled me to make good use of my time in correcting errors and sentence structure rather than waste hours of rewriting in good copy.

Class B

18. Wordprocessing is a very interesting way to approach writing because it is very interesting. It has improved my writing habits greatly and my attitude towards writing has increased.

19. Using WordStar makes it easier to write. I still have a hard time starting an essay.

20. It has improved my writing to some degrees. Although WordStar is not very advanced, it helps in producing a neat work.

21. Has not affected habits at all. I still use paper and pen; after desk-checking, I key it in. Attitudes - see question 17 - students help each other too much - because printout is not handwritten, different students can get the same thing, revise it a bit and hand it in! Therefore WP encourages cheating.

22. The wordprocessing unit has affected me a great deal with performance of an essay such as editing, using grammar checks and the spelling checker. I am still having a little difficulties with my tenses.

23. Wordprocessing has made writing easier more enjoyable for me. The correction features have helped me out when I had not noticed an error.

24. I think learning to use a wordprocessor will be an asset in the future and is therefore a good experience in college.

25. By having to use the computer, a 300 word essay begins to feel like I'm writing a novel as it takes forever to complete assignments as I'm a terrible typer. I enjoy writing my thoughts on paper not a machine, but I do understand that I must know how

to use it, and that it will likely be to my benefit in the future.

26. I've always enjoyed writing, but the main thing I feel a wordprocessing program has helped me is in my spelling.

27. Wordprocessing helps to present a more attractive and accurate essay. Otherwise, wordprocessing has not affected my writing habits or attitudes to writing.

28. Grammar and spelling mistakes are more easily noted when working on a computer. There seems to be less omissions of words and carelessness. I feel my writing has improved through the use of a wordprocessor. It's faster and neater.

29. Not at all.

30. Wordprocessing has made my writing habits better and made writing easier.

Class C

31. It has made writing more enjoyable, actually quite fun. It is much easier to use. You can make assignments look neater with a minimum number of errors.

32. It helped me with spelling errors, and to change or take our sentences easier. It checks my spelling mistakes makes me write more. And also lets me write in the computer without writing by pen and paper and then I can revise and check my work by making changes.

33. It has helped me, but sometimes when I had other homework it was hard on me. By the time I got home my eyes were tired from the computer and I couldn't do my homework. But I really enjoyed working on the wordprocessor it was good experience.

34. It has helped me improve in my writing essays and my journals. I write more than I used to.

35. I hated typing on the keyboard! But... I will try to practice on it probably start at Xmas.

36. I like using the wordprocessor.

37. I feel that it didn't help me much because I still can't sit at a computer and just start to write.

38. Wordprocessing has helped my writing be much neater. But in general it takes up too much time.

39. It has helped me with my completing essays okay.

40. When I sit down at the micro I can write better. The words flow out the screen well they won't flow out of the pen. It has improved my spelling a bit which I thought was a lost cause and also points out grammatical errors. I always like to use the wordprocessor because it's hard to read my writing. A wordprocessor makes all writers equal like a Colt 45 made all men equal during the settlement of the west.

41. I enjoy using the computer. Wordprocessing really helps with the assignments -- neat, accurate etc. I am really glad I got the chance to use the computer in college for English class. I learned a lot.

MARCH COMMENTS

1. Having the opportunity to experience wordprocessing, has made me enjoy writing, and not just having to do assignments because it is part of the curriculum. It has drastically made revising easier and having a perfectly neat and attractive work, gives me the satisfaction of submitting a good piece of work. It has also greatly improved my typing skills.

2. I can edit my work while I work. This helps me alot because it improves my writing ability. Wordprocessing is/has been very helpful and I intend to use it in the future more often.

3. No comment.

4. Because I have the capacity to quickly edit my writing with little effort, and organize my writing so that it looks neat and presentable, I enjoy writing more now than I used to. It also makes me more aware of writing errors, wordiness, etc.

5. Using wordprocessing would take longer time to finish the assignments, but it will provide well organization, neat, clear, and clean. It provides to correct the errors which I always made and allows to check your grammar and so on.

6. I don't think wordprocessing has affected my writing habits but when I do write on it I feel more confident about my work which I feel has alot to do with the appearance of the finished product.

7. In summary, wordprocessing has made the joy in writing more enjoyable. It has made mistakes in writing alot easier to correct. The print out looks more attractive than a personal handwriting.

8. I never really knew how useful and easier it is to use wordprocessing. I thought computers were too confusing and difficult to learn how to use them, but now I think differently

and I'm really interested in learning more. Wordprocessing should be included in every course.

9. I feel that wordprocessing is a asset to my Educational process.

10. To be able to finish with an extremely neat product, perfectly organized made an incentive available for writing.

11. The wordprocessing is a method to reduce my writing error. It also improve my spelling and review on my writing. I would like to spend more time on word processing, to improve my written skill.

12. Wordprocessing has motivated me to produce a neat and better paper as I look at the neat and formatted paper I enjoy it. It has also helped me keep certain formats without which the written material would look like a mess. However, if Wordstar had had some features of enhanced printing, it would have been more practical.

13. Wordprocessing is a fun way to write, it adds more to than just writing on paper. I caught on fast because of working with computers previously. My writing habits have relatively remained the same but being able to edit and correct is it's strong advantage.

14. My writing has been improved considerably ever since I use wordprocessing.

15. With wordprocessors, difficult and tedious revisions can easily be corrected. Word processors encourages you to experiment with your work by making alternative reorganizations more accessible. It also enhances our motivation and willingness to spend time writing.

16. It's helped me in seeing the need for proof reading my work.

17. It has encouraged me to want to use the machine more. It has made me also proofread better. I have frequently used the computers for my own things such as personal letters. My friends like getting letters this way because it is easier to read.

18. It has made it more enjoyable! Writing is more fun on a computer than on paper. I express myself better on a wordprocessor than anywhere else.

19. When I was in EAC150, wordprocessing made writing projects easier for me. In other subjects, it hasn't been very useful so far.

20. I enjoy using a wordprocessor because it makes writing (and rewriting) easier. New ideas can be incorporated into a piece easily and wording can be changed if desired.

21. Wordprocessing has not really affected my writing habits, but it has enabled me to easily check my spelling and grammar.

22. It has made my writing stronger.

23. I believe that my attitude towards writing has shown more of a promise and my errors are very little.

24. The ability to revise work without re-typing it is very useful to me. Writing is much less of a bother using a wordprocessor. Wordprocessors have also helped with my spelling and grammer.

25. Using the wordprocessor makes corrections in grammar, spelling, and sentence structure easier to correct.

26. My writing had somewhat improved and my attitudes towards writing has changed. It seems I like to write more than usual.

27. Wordprocessing has made writing more enjoyable. I especially like it for use in checking my spelling.

28. This semester I have gained more interest on the wordprocessor. Wordprocessing has kept my writing about the same, but my attitude has turned more positive.

29. Basically, I find the wordprocessor useful when I need to complete my English essays because I can make changes very easily and conveniently.

30. I must admit that the wordprocessors at Seneca are not much more sophisticated than an electronic typewriter!

31. It has helped me with my writing habits. I seem to make less mistakes, and I seem to correct them before they are marked incorrect.

32. Wordprocessing has saved me time, helped me in spelling, grammar and organization of an essay.

33. Wordprocessing has been a great help to me mostly in the sense of organization and presentation. It has improved my writing skills slightly for it allows me to proofread and make changes as often as necessary.

34. Wordprocessing have give me confidence in my writing and improvement on my writing and typing skills, at the same time producing a neat, attractive on my work.

35. I am not taking English this semester but I have used the wordprocessor a few times on my own time to write letters, etc. I find using the microcomputer an enjoyable and neat alternative to writing.

36. My writing has improved somewhat, but I still find it difficult to write. I like using computers to write and would enjoy it more if there were more printers for the Olivetti computers.

37. My attitudes have changed towards writing. When I have a major project to complete I like to put my ideas down on paper. Then I would start writing the essay on paper and then transfer the essay on to the wordprocessor to make all the necessary changes and corrections.

38. It makes writing much easier and is organized and neat.

39. Using Wordprocessing, my English has really improved, since I started the College. It also improved my spellings. I really enjoy using wordprocessing.

40. Wordprocessing has had little effect on my writing habits and towards my attitude of writing.

41. Since the first use of the wordprocessor, I have come to enjoy it slightly more. I have come to realize that the wordprocessor will have a great role in my future career.

42. Wordprocessing allows me to write down as my thoughts enter my mind, and then I can change my thoughts or even the order they are in. I find when I use a wordprocessor I can write alot faster.

43. Wordprocessing has affected my writing habits immensely in a positive way. Without wordprocessing I don't think I could have achieved the high marks that I did in first semester. My attitude towards writing has remained the same. (It's a chore).

44. I think that using the wordprocessor has been a great help improving my writing because I enjoy working with the computer. But working with WordStar as a processor is all not so great. There are better processors like Word Perfect that have directory, learning, utilities disks that are worlds better than WordStar.

45. I am now able to edit my work with ease. I feel that wordprocessing may have been the most important tool I've learned all semester. I believe there is a need for more computers in our school so we can work on wordprocessing skill more frequently.

46. I feel more at ease when writing into the computer. Easy to edit and correct errors.

47. Wordprocessing has generally made it easier to write effectively and accurately.

48. I feel that my writing skills have improved significantly after using the process. Errors are more effectively reduced.

However some of the software needs improvement in specific the "Grammatic Checker", program for Wordstar programs. Also the disk drives on the Persona computers are very poor.

49. Word processing has improved my habits, but had little effect on my attitude.

50. Wordprocessing has made writing for me more enjoyable, easier, and faster. Wordprocessing is great for organizing more effectively and helps in finding errors.

51. My writing skills have improved mostly because I started to read novels. I find the wordprocessor very useful because I am very weak in English and I am a messy writer. The greatest asset, however is those at which errors can be corrected. Last sem. we were only allowed 3-4 periods of instruction. I believe more is necessary.

52. I prefer writing by hand but if I were to write on the processor I would plan my writing first.

53. I could say this that it has improved my writing skills, slightly. I enjoy "The spelling checker", which improves errors. I get frustrated when these computers aren't functioning, properly and can't print, properly. I want the wordprocessor, to work better, for I want to improve my writing, more better.

CHAPTER 10

WRITING SAMPLES AND STUDENTS' WRITING SKILLS

INTRODUCTION

This chapter presents an overview of the writing samples of the students to exemplify the writing of first-semester students; to serve as examples of writing in which to find discernible improvements over the semester; and to provide material from which to judge whether competence was a factor in the adoption of the wordprocessor.

Before we look at samples of and excerpts from the writing to illustrate these points, however, two sections of the chapter discuss the design of these writing tests, and describe the conditions under which the samples were obtained.

WRITING TESTS AND THE ESSAY QUESTIONS

The situation in which the writing was sampled was a compromise between what is desirable and what is possible in a large survey such as this one. Ideally, the writer whose work is being surveyed should be able to submit the best work in a given genre or mode. Practically, the urgencies of the academic setting mean that the writer must write and submit work that is not much beyond the first-draft stage. In these cases, it is not surprising that students feel they may not write their best; what is a valuable discovery is that so many do write so well.

Beyond this, however, are the realities of the limitations of short-term studies of changes in composition. It is apparent that changes in behaviour will be observable only over a longer period of time than one semester; thus in this study we wished to see whether the changes went further than the obvious ones of instrument and attitude notable after three or four months of instruction. Would the writers merely adopt surface features of technique which would then be given up after the end of the course they were studying, or would they make a more-or-less permanent change in their writing processes? These questions are not answerable in the type of test situation we were able to use in this study. Nevertheless, the writing samples do give us a picture of how the students write in this situation. For all their frailty and the tentativeness of the conclusions we can draw from them, the writing samples are valuable documents in the search for understanding of how the wordprocessor influences the writing of this group of people.

The criteria for the essay topics were nine in number; we wanted them to

- require statement of position or point of view
- require argument in support of position
- suggest more than one dimension to the argument -- e.g. comparison of alternatives
- invite both abstract and concrete evidence
- invite student selection of level of formality while discouraging extreme informality
- engage the student in as real writing as possible, given the circumstances
- treat the student as an adult who has some experience
- avoid cultural assumptions that might penalize some students.

In the trial year of the study, 1985, we asked each faculty member to give us a copy of a piece of student writing done in class early in the semester on a topic of that faculty member's choosing. These samples would give us a broad view of the writing competency of the students to enable us to assess the value of the questions we were asking in the survey form and in the interviews.

In the formal study year, 1986, the faculty involved agreed that the students should answer a set question chosen from two, both at the beginning of the semester and at the end. Common topics across the 29 classes involved would provide a base from which to assess those skills we wished to remark as well as enable us to see the group as a whole, rather than as a collection of different classes. While the students were registered in a single course (College English), the objectives were to be reached through the individual approaches of the faculty members. Hence the kind of writing normally sought by one teacher in the early stages of the semester might be quite different from that sought by another.

The full instructions for the essays are included in Chapter 12; the topics are reproduced here:

****

TOPICS
September

TOPIC A: The danger of the past was that people became slaves. The danger of the future is that people may become robots.

TOPIC B: Changes in transportation have affected the character of society more than any other type of change.

TOPICS
December

TOPIC A Sex roles may be changing in society, but we still have a long way to go.

TOPIC B Who values life in Canada more -- the person who was born here, or the person who moved here from another country?

****

The first thing we looked for in the papers was a general maturity of writing; that is, ability to write an argument according to the criteria indicated above.

Generally based on these characteristics, we attributed a holistic grade to each paper, 1 being the lowest and 4 the highest. We tend to be conservative graders, grading in the middle ranges -- the 'C' to 'B'-- rarely attributing a grade of 'A' or outright failure, a 1 or 'D' in this case being a failure. This range of grades may be seen as the classical bell curve.

The September essays were not as substantial as those written in December. As discussed below, part of the reason for this is surely the more difficult cognitive task the questions set for September represented for the writers. Another is the problem of the timing of the test itself: students were just beginning their college work, and attending to the essay problem was perhaps more difficult for them at that time than it was in December, when it represented at least in part the culmination of a semester's study and practice in composition.

ESSAY WRITING CIRCUMSTANCES

At the first class meeting, faculty distributed the topics and the instructions for the essays; in the second meeting, the students wrote the essay by hand. Each class period is 50 minutes; students were able to do whatever planning they chose between the class meetings (classes meet four times a week, so students had at least overnight to think about the essay topic). The instructions specified they should bring no more than a page of notes to the essay session. These notes were to be submitted with the essays; in fact, fewer than one in 7 or 8 did so, either in September or December.

The September essay for the study was the second one students had had to write after being accepted to the college. Beginning in June, all students accepted for the fall semester are required to sit a reading and writing test administered by the English and Communications Division. The reading test administered is the Nelson-Denny, and the essay test is a one-hour, one-sitting effort on a topic chosen from among 3. This essay is graded once by a member of a team of markers and attributed a holistic grade. For the 649 in the test group as a whole, the grade-equivalent scores on the Nelson-Denny test averaged 10.2; the actual spread was between Grade 7 and somewhere beyond Grade 16.

The College English course requires students to write throughout the semester, but the type of writing and where it is done varies with the faculty member's course design and the needs of the students. In one case, the teacher asked the students to write by hand 600 words in a class meeting at least twice a week; in another the teacher asked students to keep a journal as well as draft and revise essays on the wordprocessor. Thus the students in the 29 classes had a variety of experiences in composition over the semester; all were asked to submit a substantial amount of their work on the wordprocessor.

But the conditions under which the December essay was produced make it hard to comment on the relevance of the length of the essays. For some classes, the faculty found it more profitable to have students hand in the disks with the essays, and the faculty member printed the essays at leisure. Other faculty asked the students both to write the essay and print it out in the class period; this would mean a shorter essay for some students. To compound the problems, on one of the test days, a snowstorm began at 7 A.M. and students were late for most morning classes. Finally, while typing skill is not necessarily a factor in the production of a set essay in a period of time, the weak typist may be at a disadvantage in such a setting. On the other hand, anecdotal reports of one faculty member who asks students to write long "first-draft" pieces on the wordprocessor suggest that even weak typists may produce long pieces -- more than 500 words -- in one class period.

SAMPLE WRITING

We turn now to a number of excerpts from both sets of essays to illustrate the variety of ability as shown in the sample group.

The first selections are opening paragraphs from September essays. They are competent first-draft writing; it is obvious the writers haven't gone over them. The ideas flow quickly; in Example 1, the writer has a structure ready to hold them, and the reader is set up for an argument. The second writer does not have full control over the structure, but the ideas come quickly, and we see the detail, detail, detail of the rhetorical questions. Example 1 indicates a loose conceptualization in the second sentence ("the technological advancements of today"), as though the past were contemporaneous with the present. Example 2 presents a neat problem: do we forgive the writer for confusing "etc." with "e.g.", or do we think the writer has a weak idea of where "etc." would be placed in a list? The latter is a true fault in grammar (the student is not writing English), while the former is a slip 'twixt mind and pen.

In all the samples used in this chapter, we have reproduced the line length of the original, and the crossouts are as seen in the handwritten essays from September. The essays from December were of course written on the wordprocessor.

****

September Example 1

> In the past, transportation methods
> hardly changed for centuries. However,
> with the technological advancements of
> today, change has been brought about very
> quickly. This has forced the character
> of society to change as well.

****

****

September Example 2

> It says danger of the past was that people
> became slaves, What is a slave? Is it someone who
> responds to their master? Is it that, only a few
> years ago, before technology was really used in
> the work place, when things were done manually
> (etc. banks, farming, auto industry, accounting)
> weren't we slaves to the long hours, and mental
> stress.

****

December Example 1 illustrates some of the difficulty in assessing writing with a simple system such as a holistic grade. This student scored lower than average in the entrance reading test, but higher than average in the writing test and earned a final grade for English in the semester of B.

The selection below is the first paragraph from the student's sample essay in December. It shows mature features of writing: the paragraph splits neatly into a pair of contrasting ideas which the two sentence boundaries define and to which the coordinate that begins the second sentence draws attention. Three declarations are made in each sentence: there is a balance in elements. The use of "and" in the first sentence pulls the reader into the frenetic vision the writer has of the stereotyped role -- this and this and this and this. After the pivoting clause, the second sentence repeats the triad of the first (the first has two threes). Modern writing often makes use of the comma as a joining marker between independent clauses, as in the second sentence of this example. The first sentence is not as successful, perhaps because the "it" in the second clause does not serve as a linking element, but this writing is controlled, and the style chosen suits the ideas. The homonym failure in the last line should be contrasted to the successful use of the -ed form and the standard use of the apostrophe: this student has control over most elements of text. Yet it is hard to attribute a grade higher than 2 on a 4-point scale because of the two solecisms.

****

December Example 1

Sex roles have changed immensely since the old days, it used to be so stereotyped, women were supposed to stay home and cook and clean and take care of the kids. But in today's society they refuse to do that, they feel that they want a career, they want to be able to enjoy life and they want to be able to experience everything they can in there life time.

****

The following excerpt is an example of the confident writing many students showed in December. This student scored 3 in the test upon entrance, higher than Grade 13 in the reading test and a B in College English in December. The ironic note adds power to the discussion of what may be an obvious subject; this essay was graded 3.

****

December Example 2

In general, the person who was born here will have different expectations than someone who immigrates here from another country. The immigrant may only be searching for a home where war is not a way of life; and to him Canada would be an ideal place to live. On the other hand, someone who was born here may feel that Canada is not supplying him with the necessities of life, like two cars and a cottage, and to this person Canada may not be good enough.

****

A sample of discovery writing may be seen in the following, where the writer first begins a statement then changes the grammatical form as the words flow:

****

September Example 3

...the new inivations and to establish them as part of their life. ~~It is due to this that we depend on them~~ If people depend on technology too much ~~then if~~ when a problem arises they will be lost.

****

A sample from a poor writer is seen in the next paragraph. The problem in this writing is not in the surface level of language, except in the last sentence, but at the conceptual level of the ideas themselves.

****

September Example 4

Another change in transportation I think is when people go by car. I go by alot of gas stations and the prices keep going up and down. I think if people go all the way downtown to work by car they might as well use the bus as it is cheaper with the price of ~~bus fare~~ gas going up ~~each~~ when who knows. As one day it could be high and you buy it and the next watch it be cheaper.

****

CHANGES OVER THE SEMESTER

September Example 5 and December Example 3 are the two essays from a student who was interviewed in September. In one sense, the student is rare, a person who has learned English as a fourth language, and whose development shows in the contrast between these essays. In another sense, the student is a typical community college student, for the colleges are a major agency in the assimilation of new Canadians, and 40% of the study group indicated a mother tongue other than English.

This student is a graduate of a Metro secondary school, and came to college with a high level of control over an adult vocabulary. In the September test situation, control over syntactic elements is uncertain in places (subject-verb agreement, subordinate clause, the definite article); in December these solecisms are virtually absent. In both cases the structure of the essay is complete. While the September essay does not present a clear thesis, it develops to a conclusion. The subject of the December essay is obviously more familiar to the writer, and the features of structural control more evident in the repeat of the "two" motif. Except for some misuse of words ("better" for "more"), and the mis-formation of others ("back-home" for "homeland"), the vocabulary again shows a high level of control and maturity.

****

September Example 5

Transportation in today's world, the time of progress and technology, is a very significant need as it has become vital to communicate with different societies. Changes in transportation has dramatically affected the character of society.

As we look through, since the existance of mankind and later on appearing intelligent life, traveling became a necessity. In search for new sources of food and shelter in their struggle with the wild nature, humans had to go beyond their small and limited community. From walking and riding animals to cars, trains and today's sophisticated travel be air, the evolution of transportation has never stopped.

One very important aspect of changes in transportations is its contribution to fast distribution of new discoveries and improved techniques all over the world. At no time at all improved transportation makes it possible for communications systems such as telephone systems, radio and TV broadcasting and other means of communication reach all over a vast geographical area.

As a matter of fact, humans have long ago accomplished the achievement of protecting themselves against the wild nature. Yet significant steps has taken towards exploration and capture of the world beyond solar system. and all these held true because of changes in transportation that are shown in the most advanced form: air travel and space exploration.

To conclude, search in space and the conquest of the unknown world has become the human's mission that seperates this era from the previous ones and that is **why** how changes in transportation have affected the character of society more than any other changes.

257 words

****

The December essay included a title page; to save space, it is omitted and the title is reproduced at the beginning of the text.

****

December Example 3

"Who Values Life in Canada More?

There are two features of valuing life in Canada: from the person's point of view who was born here and from the person's point of view who moved here from another country. The former takes things for granted while the latter values things more appropriately.

There are two ways to approach the issue of valuing life in Canada as follows. The person who was born here often is not aware of the hardship of life in other parts of the world, taking everything for granted and somehow not appreciating what this land has to offer. On the contrary, the person who moved here from another country has experienced life in his back-home, has considered staying elsewhere and has picked the option to settle here. This person values life and opportunities here better than someone who was born here.

The facts that Canada, as a western country, is known as a free country and that in reality there are social and personal freedoms, have led to a misconception that those who were born here know more about democracy and freedom. In spite of all the stereotypes about "foreigners" , "they" have been more productive than most of those who count themselves "the owners": of this land! (records at most educational and employment centres prove this claim.)

There are, however, some self-evident reasons why one who moved here from another country values life in Canada more than one who was born here. To begin with, the person who moved here has had the option of going to other countries and could consider staying elsewhere. Next, he has more knowledge about life in other countries and consequently can make a comparison between life in Canada and in other places. He, however, doesn't take education and employment opportunities and facilities for granted, acknowledging that these facilities and possibilities have taken the dedication and efforts of generations to carry on as far as today. And last, but not the least, the person who moved here has a problem-solving spirit, recognizes change phenomenon and believes in changing conditions for the better. Nevertheless, he himself is a live evident of someone who sought the task of making a better life and achieved it.

Clearly then, the person who moved here from another country values life more than the person who was born here. The latter takes things for granted, but the former values things more appropriately.

400 words

****

COMPETENCE AND THE WORDPROCESSOR

While we did not look for statistical analysis of aspects of the writing, three December essays compared to September ones showed no consistent differences in length of essay, differences noted often in other studies. In the first example, the student wrote 300 words in September and 200 in December. A second student wrote 530 words by hand in September, and 530 on the wordprocessor in December; a third wrote 250 in September and 400 in December (this pair is reproduced above).

In comparing the work of September and December it is necessary to consider the questions themselves. The September questions were much more open-ended than those of December; the latter tended to be more accessible to personal experience, eliciting formed opinion, rather than demanding an analysis of a question and the development of an argument from whole cloth. Many essays in December used argument by example in a narrative form, which students at this level tend to find easier to produce. In terms of the development of a writing course over a semester, these differences in cognitive level make sense: a broader question for students not seen; a narrower one for students the teacher knows. While the researchers designed the questions, they met with the faculty involved to discuss the questions and intentions for both essay tests; faculty found the topics acceptable in these discussions, but later reported some difficulties the students had in understanding the September questions.

Yet even the relatively more accessible topics in December could be handled in a cumbersome way by the student who has difficulty in text presentation. The student whose writing is illustrated next was streamed into the special group of College English classes, and in fact passed at the end of the semester. It is clear from this example of writing, however, that the student cannot perform well in an essay test. In the September survey, the student indicated Grade 12 general as the last English taken; thought his writing adequate for college, and that writing would play an important part in the work he would do after college (which is in fact the case for the graduates of the course this student was enrolled in); indicated an inability to write well in a test situation; and checked the response "When I write, I like to get help from my family." The wordprocessor has not yet apparently provided this student with a tool or a strategy to manage text adequately.

****

December Example 4

The woman ignored the men as they were being selfish and stubberin. They did not want too see the women get ahead in life. The men only wanted the women for a cook, a homemaker and a child barrier. They said that the women place is in the kitchen or bed and that is it.

****

The final essay reproduced here is an example of one written by a student who is comfortable with the wordprocessor and, as indicated in the September interview, his own writing competence. He came to the college experienced with wordprocessing, and owning his own computer. He described his writing procedure in answer to the question "When you have to write a homework assignment -- and essay or report -- how do you do it?"

> Go home, simmer it a day. (I don't like to be forced to write.) Next day just try to put something down on paper. Look at it, write it down, etc. Just polish it.

The final grade this student earned in the semester was B in EAC 150; the essay reproduced below was awarded a 4 in the sample marking. Features that contributed to this top grade include the strong organization as indicated in the first line of each paragraph; variety in sentence structure and the use of example. There is ambiguity in the comment on Quebec, which perhaps should downgrade the essay.

****

December Example 5

Life in this Country

People born in this country have different perspectives and ideals from people born in other countries. People born here are accustomed to the relatively high standard of living that we enjoy in Canada. In fact, at a United Nations conference, when all the delegates were asked where they would like to live, the answer was unanimous, except for the Russian delegate, as they would all like to live in Canada.

A person born here is totally assimilated to our way of thinking and living. He is used to not having to wait in line for food, and being refused a job because of his colour, creed or race, unless he lives in Quebec.

Meanwhile, a person moving here from another country will experience a rise in his standard of living. As a result, he will value his life in Canada much more. If I use a my parents as an example, I can safely say that they value their life in Canada a lot more than the Canadian born person. My mother was born in Italy, and my father in Yugoslavia. After coming here, many new doors were opened to them. They both value their life here very much, and they both couldn't be happier. Even now, thirty years after arriving here, they are still thankful of the rich life they have here.

On the other hand, I was born here, and I somewhat take living here for granted. I consider myself more thankful than most brats my age who scream/yell/hold their breath everytime their parents comment on the lateness at which they come in. A lot of 'Cold Canadians' are not thankful for living here. They believe that everything that they get in this country, they deserve. I have worked in a computer store for the past two years, and repair time on some computers brings out the worst in people. Interestingly enough, the people who appear to be the nicest to talk to have European accents, european last names and know another language. By far the worst people to deal with are people who've lived here all their life. Ask any bank teller or car mechanic!

Still not convinced? take a look at the divorce rates! Divorce rates for Canadian born people are 30% higher than for landed immigrants. My immediate family (15 aunts and uncles, and a slew of cousins) doesn't have a single divorce in its entire history.

Spend awhile in another country, and forget Florida or Myrtle Beach. This year, go to Mexico, or Brazil, and REALLY see what the rest of the world has to live with.

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CONCLUSIONS

We were not able to measure the writing techniques used in December -- i.e., we cannot say with assurance that students composed on the wordprocessor. Anecdotal reports from the faculty indicated that a large proportion of the students did so, but answers on the survey forms suggest that most students at this stage of experience with the wordprocessor will make notes and then either redraft onto the wordprocessor or copy type their essay. As indicated in the section above which discusses the test essay procedures, students were invited to make notes and bring them to the session. The writing conditions, however, may have made it difficult for the faculty to collect all the notes the students used. The March survey suggests that as students become more experienced with the wordprocessor as a writing tool, they will compose on the screen.

A number of obvious matters in text presentation should be noted in passing. Page layout differs between handwritten and computer-printed text: a hand-written text by one student in September has 7 words a line; in December the computer text has 10 words a line, and is double-spaced. The conditions under which the test in December was conducted suggest any conclusions about essay length be carefully considered. It is certainly worthwhile to remind ourselves that faculty who have to read student writing find computer printouts much easier to read than handwriting. When the mechanical aspects of writing fade into the background, the ideas gain prominence, as this remark from a student interviewed in the trial year of the study suggests:

> With the wordprocessor, instead of visualizing it in my mind, you can see what is in your mind come to life on the screen. You can see it evolve on the screen. You can see it building. When you write on paper, usually the little errors foul you up. Can catch flaws on the screen; get a second chance .... Little mistakes interrupt writing in other methods.

The essays in the study represent both the old and the new way of writing in the college setting. While some of the differences may be subtle, nonetheless there is a substantial change in the context of writing when the wordprocessor is added. To repeat, the appearances of the essays, first of all, indicate differences in text presentations. On the one hand, the handwritten texts are full of character and individual differences: the ones from the wordprocessor have a sameness to them that may make them dull to the reader. The reader of the handwritten ones must wrestle with the page for meaning, fighting the specific confusions of pen and penmanship along with the writer's search for ideas. The reader of the printout immediately must tolerate clarity of text presentation -- neat boundaries, a "u", a "u", and not an "m" -- with immediately obvious weakness of thought or, indeed, beauty of phrase. This is a radical change for the teacher. One faculty member repeatedly observed that he could mark many more papers than previously, simply because he could now read what the students had to say.

Although we can identify some important differences between assignments done by hand and by wordprocessor, we also note fundamental similarities when the context is restrictive. When the time is restricted, pen and paper and keyboard and screen both are means primarily for producing text, and only secondarily, as time allows, for revising and refining it. In this case, no matter which medium is used, much student writing is first-draft writing. And in this case, the writing situation may actually reinforce the acceptability of first-draft writing rather than encouraging revision.

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APPENDIX A

SURVEYS USED IN THE STUDY

The research project used the three questionnaires that are reprinted on the following pages.

The surveys were developed and administered as follows:

	September Survey	**December Survey**	**Follow-up Survey**
Field Tested	September, 1985	December, 1985	April, 1986
Administered	September, 1986	December, 1986	March, 1987
Method	In class	In class	Mail/return
Administered By	Faculty	Faculty	Mail out by researchers

Teachers administering the surveys in their classes reported that students required ten to fifteen minutes to complete them.

Statistical results and student comments are presented in Chapters 8 and 9 respectively.

SURVEY OF
STUDENT APPROACHES TO WRITING
SENECA COLLEGE OF APPLIED ARTS AND TECHNOLOGY
SEPTEMBER, 1986

This questionnaire is part of a study of how effective wordprocessing is in helping you learn to write better. Please complete it as honestly as possible. At the end of the semester, you will be asked to complete a similar questionnaire on your reactions to wordprocessing in curriculum. Both surveys are confidential and neither will affect your grade in any way.

PART A: GENERAL INFORMATION (please print)

1. STUDENT NAME: ____________________ last name ______________ first name

2. STUDENT NUMBER:_____-_____-_____

3. SEX:___ 4. AGE:____

5. PROGRAM: ____

6. CURRENT ENGLISH SUBJECT: EAC__________

PLEASE CIRCLE THE MOST APPROPRIATE ANSWER

7. This is my (first/second/third/fourth) semester at Seneca.

8. I rate my typing ability as (good/fair/poor).

9. The last English course I took was

   (a) Grade XII general or equivalent
   (b) Grade XII advanced
   (c) Grade XIII
   (d) a Seneca English course
   (e) a course in another college or university

10. I am (experienced with/ familiar with/ not familiar with) microcomputers.

11. I have used a microcomputer (at school/at home/at work). (please specify make used:____________________)

12. At my home we (have/ don't have) a microcomputer.

13. My native language is __________________.

14. The language I speak most often at home is ________________.

PART B: SELF-ASSESSMENT

PLEASE CHECK (   ) YES OR NO IN THE SPACE PROVIDED

	YES	NO
15. I think my writing is adequate for the demands of college.	___	___
16. I think my writing is adequate for the demands of work.	___	___
17. Writing will play an important part in the work I will do after college.	___	___
18. I will likely have to use a computer to write when I go to work.	___	___
19. When I revise my writing, I make major changes.	___	___
20. When I revise my writing, I make minor changes.	___	___
21. I am confident about my writing.	___	___
22. I write one page or less a week.	___	___
23. I write more than one page a week.	___	___
24. At home my family often write letters.	___	___
25. At home my family seldom write anything.	___	___
26. I can write well in a test situation.	___	___
27. I enjoy writing.	___	___
28. I like to write with people around me.	___	___
29. I like to write alone.	___	___

** CHOOSE THE MOST APPROPRIATE ANSWER **

30. When I write, I like to get help from

___ (a) my family
___ (b) a friend
___ (c) a teacher
___ (d) no one

31. I do my best writing

___ (a) at home
___ (b) at school

32. The best advice I ever got about writing came from

___ (a) a member of my family
___ (b) a friend
___ (c) a teacher
___ (d) a book

33. When I am preparing to write, I

___ (a) plan mentally
___ (b) make notes in various forms
___ (c) make an outline
___ (d) start writing as soon as possible

34. When I write I prefer to

___ (a) do a draft copy which can be changed
___ (b) do the final version right away

35. The type of writing which I find most enjoyable is

___ (a) letters to friends or family
___ (b) writing for myself
___ (c) school assignments
___ (d) all of the above
___ (e) none of the above

36. The type of writing I find least enjoyable is

___ (a) letters to friends or family
___ (b) creative writing
___ (c) school assignments
___ (d) all of the above
___ (e) none of the above

37. Overall, I consider my writing to be

___ (a) very good
___ (b) good
___ (c) average
___ (d) below average
___ (e) well below average

PLEASE COMMENT ON YOUR WRITING BELOW

38. The best thing about my writing is

____

____

____

39. The worst thing about my writing is

____

____

____

Thank you!

SURVEY OF STUDENT APPROACHES TO WRITING
SENECA COLLEGE OF APPLIED ARTS AND TECHNOLOGY
DECEMBER, 1986

This survey asks for your comments on wordprocessing and writing. Your answers will assist in curriculum review and development and will not affect your grades in any way. Thank you.

LAST NAME:____________________ FIRST NAME:____________________

STUDENT NUMBER:______-______-______ SEX: ____

PROGRAM: ____________________ SUBJECT: EAC__________

THIS SEMESTER I TOOK THESE SUBJECTS WHICH INVOLVED MICROCOMPUTERS:
(1) EAC 150 (2) ______ (3) ______

MY NATIVE LANGUAGE IS ____________________

****

PLEASE CHECK YES OR NO IN THE SPACE PROVIDED	**YES**	**NO**
1. This semester I have used wordprocessing for		
(a) assignments in English	___	___
(b) assignments in subjects other than English	___	___
(c) personal writing	___	___
(d) fun	___	___
2. Next semester I expect to use wordprocessing for		
(a) most of my assignments in English	___	___
(b) major assignments in English	___	___
(c) assignments in subjects other than English	___	___
(d) personal writing	___	___
(e) fun	___	___
3. My family has a microcomputer at home.	___	___
4. I think my writing is adequate for the demands of college.		
5. I am confident in my writing.	___	___
6. I enjoy writing.	___	___
7. I enjoy writing with a microcomputer.	___	___
8. I think my writing is adequate for the demands of work.	___	___

CHOOSE THE MOST APPROPRIATE ANSWER

9. When I am preparing to write I prefer to

___ (a) start writing as soon as possible
___ (d) think about what I am going to do so that I have a general plan in my head
___ (c) make some notes which I will draw upon as I write
___ (b) make a completely organized plan

10. Combining class time and individual work, I estimate that I used wordprocessing this semester for

___ (a) less than 10 hours
___ (b) 11 to 20 hours
___ (c) 21 to 30 hours
___ (d) more than 30 hours

11. To learn to use wordprocessing fairly independently takes, in instruction and practice,

___ (a) less than 10 hours
___ (b) 11 to 20 hours
___ (c) 21 to 30 hours
___ (d) more than 30 hours

12. I rate my typing ability as

___ (a) good
___ (b) adequate
___ (c) poor

13. Learning to use a micro for writing is

___ (a) very easy
___ (b) easy
___ (c) difficult
___ (d) very difficult

If (c) or (d), what is the primary cause of the difficulty?

____

14. I found the access to micros and printers to be

___ (a) very good
___ (b) good
___ (c) difficult
___ (d) very difficult

15. Composing on a microcomputer is

___ (a) enjoyable
___ (b) about the same as any other method of writing
___ (c) frustrating

16. I usually

___ (a) write with pen and paper
___ (b) type
___ (c) use a microcomputer
___ (d) start on paper then use a microcomputer

17. When they write with a wordprocessor, students help each other

___ (a) more than they do in a regular writing class
___ (b) as often as they do in a regular writing class
___ (c) less than they do in a regular writing class

18. For my development as a writer, the time spent on wordprocessing was

___ (a) very worthwhile
___ (b) worthwhile
___ (c) not worthwhile
___ (d) an extreme waste of time

19. For my career preparation, the time spent on wordprocessing was

___ (a) very worthwhile
___ (b) worthwhile
___ (c) not worthwhile
___ (d) an extreme waste of time

BASED ON YOUR EXPERIENCE AND ON OBSERVATION OF OTHER STUDENTS, INDICATE YOUR CONCLUSIONS CONCERNING THE FOLLOWING STATEMENTS.

20. To use wordprocessing effectively, students need:

	1	2	3	4	5
(a) good typing skills	___	___	___	___	___
(b) good ability with technical processes	___	___	___	___	___
(c) an interest in writing	___	___	___	___	___
(d) good writing skills	___	___	___	___	___
(e) instruction or practice weekly	___	___	___	___	___
(f) regular access to people with expertise in wordprocessing	___	___	___	___	___

1= strongly disagree
2 = disagree
3 = no opinion
4 = agree
5 = strongly agree

21. For college students, wordprocessing is valuable for:

	not useful 1	2	3	4	very useful 5
(a) planning and getting started	___	___	___	___	___
(b) improving spelling	___	___	___	___	___
(c) reducing the number of errors	___	___	___	___	___
(d) organizing more effectively	___	___	___	___	___
(e) editing (revising) more easily	___	___	___	___	___
(f) producing neat, attractive work	___	___	___	___	___
(g) generally improving writing	___	___	___	___	___
(h) increasing enjoyment of writing of writing	___	___	___	___	___
(i) increasing confidence in writing	___	___	___	___	___

PLEASE PROVIDE SOME SUMMARY COMMENTS

22. IN SUMMARY, HOW HAS WORDPROCESSING AFFECTED YOUR WRITING HABITS OR YOUR ATTITUDES TO WRITING?

____

____

____

____

____

____

____

*********************THANK YOU FOR YOUR COMMENTS*********************

SURVEY OF STUDENT APPROACHES TO WRITING
SENECA COLLEGE OF APPLIED ARTS AND TECHNOLOGY
MARCH, 1987

Last semester, you completed a survey on your first experience with wordprocessing. This follow-up survey studies how you have used wordprocessing during your second semester at Seneca. Please answer the questions below as honestly as possible. Your answers will assist in curriculum review and development.

1. STUDENT NAME: ______________________________

2. STUDENT NUMBER: _____-_____-_____ 3. SEX: ___

4. PROGRAM: ____________________ 5. CURRENT EAC_____

PLEASE CHECK YES OR NO IN THE SPACE PROVIDED	**YES**	**NO**
6. This semester I have used wordprocessing for		
(a) assignments in English		
(b) assignments in subjects other than English		
(c) personal writing		
(d) fun		
7. Next year I expect to use wordprocessing for		
(a) most of my assignments in English		
(b) major assignments in English		
(c) assignments in subjects other than English		
(d) personal writing		
(e) fun		

ON A SCALE OF 1 TO 5, RATE THE VALUE OF WORDPROCESSING

	not useful				very useful
	1	2	3	4	5
8. For planning and getting started					
9. For improving spelling					
10. For reducing the number of errors					
11. For organizing more effectively					
12. For editing (revising) more easily					
13. For producing neat, attractive work					
14. For generally improving writing					
15. For increasing students' enjoyment of writing					
16. For improving students' confidence in their writing					

CHOOSE THE MOST APPROPRIATE ANSWER

17. This semester my writing ability

___ (a) improved considerably
___ (b) improved slightly
___ (c) remained about the same
___ (d) deteriorated slightly
___ (e) deteriorated considerably

18. This semester my skill with wordprocessing

___ (a) improved considerably
___ (b) improved slightly
___ (c) remained about the same
___ (d) deteriorated slightly
___ (e) deteriorated considerably

19. This semester, skill with wordprocessing has proven to be

___ (a) more useful than I expected
___ (b) as useful as I expected
___ (c) less useful than I expected

20. I estimate that I used wordprocessing this semester for

___ (a) less than 10 hours
___ (b) 11 to 20 hours
___ (c) 21 to 30 hours
___ (d) more than 30 hours

21. Composing on a microcomputer is

___ (a) enjoyable
___ (b) about the same as any other method of writing
___ (c) frustrating

If (c), please state the reason:______________________

____

22. If I had a choice, I would prefer to

___ (a) write by hand
___ (b) type
___ (c) use a microcomputer
___ (d) start on paper then use a microcomputer

23. For my development as a writer, the time spent on wordprocessing was

___ (a) very worthwhile
___ (b) worthwhile
___ (c) not worthwhile
___ (d) an extreme waste of time

24. For my career preparation, the time spent on wordprocessing was

___ (a) very worthwhile
___ (b) worthwhile
___ (c) not worthwhile
___ (d) an extreme waste of time

25. Next year I expect to use wordprocessing

___ (a) frequently
___ (b) occasionally
___ (c) never

BASED ON YOUR EXPERIENCE AND ON OBSERVATION OF OTHER STUDENTS, INDICATE YOUR CONCLUSIONS CONCERNING THE FOLLOWING STATEMENTS.

26. To use wordprocessing effectively, students need:

	1	2	3	4	5
(a) good typing skills	___	___	___	___	___
(b) good ability with technical processes	___	___	___	___	___
(c) an interest in writing	___	___	___	___	___
(d) good writing skills	___	___	___	___	___
(e) instruction or practice weekly	___	___	___	___	___
(f) regular access to people with expertise in wordprocessing	___	___	___	___	___

1= strongly disagree
2 = disagree
3 = no opinion
4 = agree
5 = strongly agree

IN SUMMARY, HOW HAS WORDPROCESSING AFFECTED YOUR WRITING HABITS OR YOUR ATTITUDES TO WRITING?

____

____

____

____

____

____.

*********************THANK YOU FOR YOUR COMMENTS*********************

APPENDIX B

INTERVIEW QUESTIONS

RESEARCH PROJECT ON
WORDPROCESSING AND COLLEGE ENGLISH

September 1986 interview questions:

Name ______________________________ NUMBER ___________

Course ___________ EAC ______

Semester in the College:

----

first impressions

Thanks for coming to this interview.

The purpose of this interview is to help us gain an understanding of what you do when you write, either on your own or as part of your school work, and what you think about writing. Some of the questions require a brief answer, while some of them seek a longer comment. There are no 'right' answers; we are interested in what you have to say.

The researchers will preserve your anonymity in making use of your comments for study purposes.

What do you think is involved in "good writing" ?

What do teachers mean when they say writing is "good" or "bad" ?

In what class were you taught writing in your last year of high school?

When did you take your last year of high school?

What advice do you best recall your teachers giving you personally about your writing?

How long does it take you to get to the College in the morning?   to go home at night?

Would you say you generally had a successful experience with writing in high school?   Tell me about it.

What do you think is the best feature of your writing?

When you have to write a homework assignment--an essay or report--how do you do it?

What advice would you give to someone who wanted to know how to write better?

Do you like to write?

Can you describe an instance in which you have found writing to be frustrating?

What made it so?

Where and when do you do your best writing?

What kinds of things do you like to write?

Do you revise the notes you make in class--that is, do you rewrite them?

When I say "This piece of writing needs revision" what do you think I mean?

Tell me what you do when you have to write an essay in class on a topic given to you by the teacher.

What kind of writing do you do? Do you write letters or postcards while travelling, for instance?

Do you write because you need to at work or at home--for instance, letters or instructions?

Do you ever write stories or poems?

As you can tell from the questions I have been asking you, we are interested in how you feel about writing. In summary, how would you describe yourself as a writer?

---

general impressions
length
other comments

APPENDIX C

WRITING SAMPLES

The writing samples used in the study were written according to the instructions found at the end of this chapter. In the trial year, 1985, the writing samples were simply copies of pieces the teacher set for the students in the first week of classes and later in the semester when the students had become familiar with the wordprocessor.

In the formal study year, 1986, we gained agreement among the faculty involved that the students should answer a set question chosen from two, both at the beginning of the semester and at the end. Common topics across the 29 classes involved would provide a base from which to assess those skills we wished to remark as well as enabling us to see the group as a whole, rather than as a collection of different classes. The criteria for the essay topics were nine in number; we wanted them to

* require statement of position or point of view
* require argument in support of position
* suggest more than one dimension to the argument -- e.g. comparison of alternatives
* invite both abstract and concrete evidence
* invite student selection of level of formality while discouraging extreme informality
* engage the student in as real writing as possible, given the circumstances
* treat the student as an adult who has some experience
* avoid cultural assumptions that might penalize some students.

We did not ask for a set length for either essay sample. Students at this level of work are accustomed, we felt, to writing during a time limit, and would produce a complete argument of a self-chosen length. In fact, this is what was submitted, whether the essay was 200 words or 500. The streaming system for the classes apparently works "in the mass": most students in the EAC 150X classes wrote shorter pieces than those in the regular classes.

But the conditions under which the December essay was produced make it hard to comment on the relevance of the length of the essays. For some classes, the faculty found it more profitable to have students hand in the disks with the essays, and the faculty member printed the essays at leisure. Other faculty asked the students both to write the essay and print it out in the class period; this would mean a shorter essay for some students. To compound the problems, on one of the test days, a snowstorm began at 7 a.m. and students were late for most morning classes. Finally, while typing skill is not necessarily a factor in the production of a set essay in a period of time, the weak typist may be at a disadvantage in such a setting. On the other hand, anecdotal reports of one faculty member who asks students to write long "first-draft" pieces on the wordprocessor suggest that even weak typists may produce long pieces -- more than 500 words -- in one class period.

In comparing the work of September and December it is helpful perhaps to begin with the questions themselves. The September questions were much more open-ended than those of December; the latter tended to be more accessible to personal experience, eliciting formed opinion, rather than demanding an analysis of a question and the development of an argument from whole cloth. Many essays in December used argument by example, a narrative form, which students at this level tend to find easier to produce. In terms of the development of a writing course over a semester, these differences in cognitive level make sense: a broader question for students not seen; a narrower one for students the teacher knows. While the researchers designed the questions, they met with the faculty involved to discuss the questions and intentions for both essay tests; faculty found the topics acceptable in these discussions, but later reported some difficulties the students had in understanding the September questions.

While the instructions explicitly invited students to prepare the essays on paper, in neither September nor December did a large portion of the students submit such notes. In order to avoid bias in grading the essays, we asked the students to put their names on a separate sheet in the September survey. We would want to identify students later for longitudinal study purposes, but we felt as markers we might react to names. This technique worked with a reasonable degree of success: only about 15% of the students put their names on every page.

We were not able to measure the writing techniques used in December -- i.e., we cannot say with assurance that students composed on the wordprocessor. Anecdotal reports from the faculty indicated that a large proportion of the students did so, but indications from the survey forms suggest that most students at this stage of experience with the wordprocessor will make notes and then either redraft onto the wordprocessor or copy type their essay. The March survey suggests that as students become more experienced with the wordprocessor as a writing tool, they will compose on the screen.

A number of obvious matters in text presentation should be noted in passing. Page layout differs between hand-written and computer-printed text: a hand-written text by one student in September has 7 words a line; in December the computer text has 10 words a line, and is double-spaced. Length is discussed above and in Chapter 8; the conditions under which the test in December was conducted suggests any conclusions about essay length be carefully considered. It is certainly worthwhile to remind ourselves that faculty who have to read student writing find computer printouts much easier to read than handwriting. As the students themselves remark, when the mechanical aspects of writing fade into the background, the ideas gain prominence.

SENECA COLLEGE OF APPLIED ARTS AND TECHNOLOGY

EAC ESSAY, SEPTEMBER 1986

In the next meeting of this class, you will be asked to write an essay on one of the topics below.

Your teacher will use the essays to assess particular classes' and students' needs as EAC 150 begins. In addition, copies of the essays will be forwarded to a research project studying the writing of first semester college students. This research project will keep all writing samples confidential and will have no bearing on your grades.

To prepare to write, think about the statements below, relating them to your ideas and experiences. Choose either topic A or Topic B before the next class.

You are welcome to make notes, and to bring a maximum of one page of notes to use when you write. These notes must be handed in along with your essay.

Please bring this page of instructions with you for reference when you write.

* * *

You will be given paper on which to write your essay. Please begin your essay on the second page of paper and put the following on the first page provided:

last name, first name
student number
EAC section (e.g. EAC 150FA)
Date

Thank you.

TOPICS

TOPIC A: The danger of the past was that people became slaves. The danger of the future is that people may become robots.

TOPIC B: Changes in transportation have affected the character of society more than any other type of change.

RESEARCH PROJECT ON WORDPROCESSING AND COLLEGE ENGLISH

At the beginning of the semester students in many EAC classes were asked to prepare and write an essay on one of two topics as part of a research project on student writing.

As we near the end of the semester, we are asking you to repeat this process -- to choose a topic one day and write the essay in one class period the next day.

This time, we would like you to write the essay on the wordprocessor.

DAY 1

Choose one of the topics below. You may prepare it at home, but bring only notes to the class period in the wordprocessing room. If you bring notes, please hand them in to your teacher.

DAY 2

In class time, write the essay on the wordprocessor and hand in a copy according to your teacher's instructions.

****

TOPICS

TOPIC A Sex roles may be changing in society, but we still have a long way to go.

TOPIC B Who values life in Canada more -- the person who was born here, or the person who moved here from another country?

****

Thank you for your assistance in this research.

ANNOTATED BIBLIOGRAPHY ON COMPOSITION AND THE WORDPROCESSOR

This selected bibliography describes major sources in composition research and the use of computers in writing and points to local resources in the field as well. It complements the discussion in Chapter 5 of the report.

Beach, Richard and Lillian S. Bridwell, eds. 1984. New Directions in Composition Research. New York: The Guilford Press.

A collection of essays on current research in writing representing most of the major areas of current research in American Universities. The essay on wordprocessing and writing provides a valuable overview.

Bridwell, Lillian and Ann Duin. 1985. Looking In-Depth at Writers: Computers as Writing Medium and Research Tool. In Writing On-Line. Upper Montclair, New Jersey: Boynton/ Cook. pp, 115-122.

This essay sums up some of the work of the research project at the University of Minnesota under Bridwell and Donald Ross, perhaps the major formal study for the effects and uses of wordprocessing among different types of college writers. The university was host to a conference on computers and writing in 1984, and many of the papers there were collected and printed through the journal Computers and Composition under Cythia Selfe and Kathleen Kiefer.

Bridwell, Lillian, Geoffrey Sirc, and Robert Brooke. 1985. Revising and Computing: Case Histories of Student Writers. Acquisition of Written Language. Norwood, New Jersey: Ablex Publishing Corporation, pp. 172-194.

Part of the large volume of material that has come from the U. of Minnesota Computers and Writing project, this paper describes what five students did when they were required to submit assignments in a business writing course in computer printout format. All students in several classes were surveyed (n=48) on their attitude to using the wordprocessor in writing, and these five volunteered for a more thorough history of how they adapted their writing processes to writing with the wordprocessor. The object of this research was not to attribute changes in writing necessarily to identify the source of these changes, but to "describe differences" in method and behaviour in the writing and revising activities of these students.

Brysom, M., P. H. Lindsay, E. Joram, and E. Woodruff. Augmented Word Processing: the Influence of Task Characteristics and Mode in Production on Writers' Cognitions. ERIC ED276016. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 16-20, 1986 .

A study of 16 pupils in Grade 8. Just the availability of computers had no influence on writing. Learner characteristics and mode of production on text production must be considered.

Burns, Hugh. 1984. The challenge for computer-assisted rhetoric. Computers in the Humanities 18, pp. 173-181.

Burns reviews some developments such as his own invention programs (the early broadcast ones have been superseded, but they apparently did have an improving effect on writers). This is a general review paper which sets down some issues including CAI as well as wordprocessing. Burns appears in Wresch's text noted below.

Collier, Richard. 1983. The word processor and revision strategies. College Composition and Communication, 34, No. 2 (May). pp. 149-155.

Collier did this work at Mount Royal College in Calgary in the early 1980s. It is one of the first projects to try to see whether the wordprocessor itself affected the strategy of writing, and this article is still referred to. Collier's conclusion is ambivalent: his students liked the machine, and wanted to keep using it, but the products and the procedures were not significantly changed.

Collins, Terence, and Lynda Price. 1986. Testimony from Learning Disabled College Writers on the Efficacy of Word Processing in Their Writing Process. Minneapolis, Minnesota. Learning Disabled Writers Project, University of Minnesota.

This publication comes from the University of Minnesota General College research project on wordprocessing and the learning disabled writer which began in the fall of 1985. The comments in this transcript are worth study; some of the evidence is stunning, showing as it does radical differences in text written by hand and on the wordprocessor.

Daiute, Colette. 1983. The computer as stylus and audience College Composition and Communication 34, No. 2 (May), pp. 134-145.

A central article in wordprocessing applications in the classroom across the curriculum. The title itself suggests the wordprocessor is both writing tool and audience for the writing.

Daiute, Colette. 1985. Writing and Computers. New York: Addison-Wesley.

Daiute provides a valuable bibliography, and her comments on the use of computers in writing cover the whole of education from the earliest years through college. Her work is based on research and classroom practice, and she reports a change in writing behaviour with the use of the computer (or wordprocessor). A most useful book.

Daly, J.A. 1983. Writing apprehension, self-esteem, and personality. Research in the Teaching of English 17, pp. 327-334.

Daly has presented research in writing apprehension, with questionnaires for students and teachers, and is very strong on statistical method in English research. See RTE Vol. 9, No.3 (Winter 1975), pp. 242-249.

Flower, Linda. 1979. Writer-based prose: A cognitive basis for problems in writing. *College English*. 41, No. 1 (September), pp. 19-35.

A discussion of the value of recognizing the usefulness of writer-based strategies in writing and thinking as a basis for composition which can then be revised for a reader.

Gay, Pamela. 1984. How attitude interferes with the performance of unskilled college freshman writers. ERIC ED 234 417.

This is a readable, thorough paper, a case study of three freshman writers at an American university. The students tend to see writing as outer-directed (i.e. for the teacher) rather than self-directed, and have an unrealistic view of their abilities. Presents an interview guide, and refers to Daly's work on writing apprehension (see *Research in the Teaching of English*, Winter 1975).

Harris, Jeannette. 1985. Students writers and word processing: A preliminary evaluation. *College Composition and Communication* 36, No. 3 (October), pp. 323-330.

In a study of six students who volunteered from two of her composition classes, the author found that the wordprocessor did not "in and of itself, encourage students to revise more extensively...." She found that five out of six students like to use the wordprocessor -- really like it -- but they don't conform to a modern model of writing when they use the equipment.

Hayes, John R. and Linda S. Flower. 1984. A cognitive model of the writing processes of adults. ED 240 608.

A summary paper from years of research, stating that adult writers write differently from naive writers. Important aspects of this writing style can likely be taught. We learn that writing is not done the way the traditional textbooks suggest, but is a recursive process in which several things go on at once -- search for informing ideas, drafting and trying plans, and movement from phase to phase and back again. The method of protocol analysis is described: there is some controversy over its accuracy (see Bridwell), but it does give lots of information for the researcher (see Heidi Swarts and Flower and Hayes in *New Directions....*

Huard, Susan D. and Patricia Malinowski. 1986. An annotated bibliography: a review of the literature on computer-assisted writing for the college developmental educator. ED277032.

This bibliography contains 131 items, some of which are themselves bibliographies, and includes a description of the unpublished theses of Craig Etchison at the University of Indiana: "A comparative study of the quality and syntax of compositions by first-year college students using handwriting and word processing", which was reported at CCCC Atlanta, March, 1987. Etchison's conclusion states that students with wordprocessing improved more than the students without. Quality is defined as "number of words generated in an essay."

Kiefer, Kathleen E. and Charles R. Smith. 1983. Textual analysis with computers: tests of Bell laboratories' computer software. Research in the Teaching of English. 17, No. 3 (October), pp. 201-214.

The English department at Colorado State has adapted the Writer's Workbench software to the writing program; this is one of several articles, all favourable, that describes the experience. The Bell software gives the user a lot of feedback on surface elements of style such as the use of cliches, repetition, readability as measured by sentence length and word choice, and formal structure such as the use of initial topic sentences; a student essay can be analysed by one or several of these programs, and the teacher can select and revise the kind of comment the machine provides with the analysis. Associated articles are found in IEEE Transactions, January 1982, and other articles by the Colorado State group.

Kress, Flemming. 1987. Writing with a "Pro". Toronto. OISE Press.

A texbook that combines sensible practice in the teaching of writing with instruction in using the wordprocessor to best advantage.

Kurth, Ruth J. 1987. Using word processing to enhance revision strategies during student writing activities. Educational Technology. (January):13-19.

A special-interest writing class of 28 grade 10 and 11 students in the use of wordprocessing; the author concludes (1) that wordprocessing "can be used to enhance the teaching of written composition," though the study "did not support the idea that working with wordprocessors will automatically increase the quality and quantity of student compositions"; and (2) that the most important ingredient is a knowledgeable teacher -- though it isn't clear whether the study set out to prove this last contention. A thorough bibliography.

Myers, Peter. 1985. Wordprocessing in the English program at Newnham campus, Seneca College. ECOO Output 6, No. 1 (June), pp. 23-24.

This note describes the context of the early adoption of wordprocessing to the English program; first presented as a paper to the Second annual Metro-area colleges conference on computers and English.

Myers, Peter. 1986. Wordprocessing and community college writing. Paper presented to the Conference on College Communications, Niagara College. (June).

A review of the context of computers and English, urging community college English teachers to apply their experience to the development of wordprocessing-based curriculae.

Myers, Peter. 1987. Computers in English. Paper presented to the Heads of English, Colleges of Applied Arts and Technology. (May).

An overview of the realities of writing with computer-assistance, with reference to current practices in teaching and research as well as in business and technical writing.

Newton, Sandra S. 1984. Computer resources for writing. ED 254 262.

Overviewing computer uses in writing for community college teachers and classes, Newton is enthusiastic about wordprocessing, less so about "low-level resources" such as drill and practice. She likes the idea of WANDAH, Writer's Workbench, etc., though it isn't clear whether she has used them or seen them in action. She sees games like ZORK and ENCHANTER as valuable language games for vocabulary precision (as well as syntactic).

Pianko, Sharon. 1979. A description of the composing processes of college freshman writers. Research in the Teaching of English, 13, No. 1 (February), pp. 5-22.

Pianko concludes that naive writers do not have an adequate model of the writing process to work from; they have "underdeveloped composing processes" that have little to do with "traditional definitions of writing as grammar, planning, etc., but have to do with the ability to reflect on what is being written". Devised a "writing behaviour question guide" and "background interview guide". Pianko suggests teachers have to move from focusing on correcting the product to helping students expand and elaborate the stages of the process. The first study of college freshmen "based on multi-faceted direct observation and immediate interviews".

Pringle, Ian and Aviva Freedman. 1985. A Comparative Study of Writing Abilities in Two Modes at the Grades 5, 8,and 12 Levels. Toronto: Ontario Ministry of Education.

This report is especially valuable for its summary of method, and its provision of a context of reference for research in writing.

Rabiansky-Carriuolo, Nancy. 1984. The teaching and evaluation of composition: Developmental college freshmen. (Presented at NCTE Nov. 16-21, 1984.) ED 253 888.

This research makes use of the Daly-Miller test of writing apprehension (found in Research in the Teaching of English 9, (Winter 1975), pp. 242-249.); and uses a learning-styles inventory.

Rodrigues, Dawn. 1985. Computers and basic writers. College Composition and Communication. 36, No. 3 (October), pp. 336-339.

The author comments on attitude change attributable to wordprocessing in basic writing class in university. Of the 12 students in the course, 11 completed it, and while their writing improved no more than similar students who didn't use wordprocessing, Rodrigues claims they internalized writing processes and gained substantially in confidence in their writing over the course of the semester. She states that writing teachers should teach wordprocessing because they are "best qualified to present wordprocessing strategies which help students learn how to compose and revise". Rodrigues carefully introduces wordprocessing commands as they are needed to achieve teaching goals -- for instance, insertion when working on adding detail. A useful article for all teachers of writing using the wordprocessor.

Scardamalia, Marlene and Carl Bereiter. 1981. Writing for Results. Toronto: OISE Press.

This text offers activities designed to make the writer familiar with techniques of developing the composition; see also Flemming Kress's text.

Scardamalia, Marlene and Carl Bereiter. 1986. Research on written composition. Wittrock, ed. Handbook of Research in Teaching. 3rd edition. New York: Macmillan, pp. 778-803.

A necessarily brief summary which nonetheless touches most of the aspects of the work in composition research since about 1975, a period that has seen a huge amount of work. Lists 9 focuses of research: 1. Early development of written symbolism, 2. Discourse analysis, 3. Story grammar, 4. Basic writers, 5. The new rhetoric, 6. Writing apprehension, 7. Classroom practices, 8. Response, 9. The composing process. A very brief comment on the use of computers in composition (797) mentions the computer as tool, and suggests that aids to composing are yet to be found in the application of computers to writing, though mention is made of the reports of Burns, Woodruff and Bereiter, and Kiefer and Smith. A huge bibliography. Extensive reference to their own work.

Schwartz, Helen J. 1982. Monsters and mentors: Computer applications for humanistic education. College English. 44, No. 2 (February), pp. 141-152.

An article that may by now seem dated, but which represents a useful review of what computers have offered English teachers over the years, and how the changes of the microcomputer revolution are increasing the use of computers. Generally CAI, some mainframe editing, some database, and communications conferencing.

Schwartz Helen J. 1985. Interactive Writing. New York Holt, Rinehart and Winston.

Schwartz, like Daiute, suggests method for the use of computers in writing. Hers is the earliest textbook to incorporate both computer-assistance to the writing process and instruction in using the wordprocessor in writing.

Segal, Nadine. 1987. Computers in secondary English. Paper presented at the Eighth Annual ECOO conference. (April 30-May 1).

Segal described the work she has done since 1985 with learning-disadvantaged students in Grade 10 and with the 5th English subject for general language students in Pearson

Secondary School in Scarborough. Using the wordprocessor and support programs (from MECC mostly), she has developed techniques in teaching with the wordprocessor and computer that show definite gains in the writing of her students. This is most valuable work.

Selfe, Cynthia. 1987. Creating a computer lab that composition teachers can live with. Collegiate Microcomputer Number 2 (May).

Dr. Selfe suggests designing a lab around writers, writing teachers and the writing program and not around computers. It should make use of the best current theory, research and pedagogy; and the labs should be used to support research in writing, the writing process and written text.

Smith, Frank. 1983. The promise and threat of microcomputers for language learners. On TESOL '83: Selected papers from the 17th Annual Convention, Toronto., pp. 1-18.

A summary of a humanist's thoughts on language development in children, and the humanist role computers can play in the exercise of their naturally-acquired skills. It carries a severe warning that while the computer can be as liberating for normal children as it has been for autistic kids, it can be used to impose a controlling curriculum. Teachers must learn about the tool, and with their students strive to use it in the best ways possible -- a kind of investigation of the limits of the machine. The question of use is political: not whether the machines should be used, but how.

Smith, Frank. 1982. Writing and the Writer. New York: Holt, Rinehart and Winston.

This text is a valuable summary of theories and research in writing, providing comments on the writing process, learning to write, and teaching writing that are insightful and directing.

Smye, Randy. 1984. Computer innovations for teaching the writing process. English Quarterly. XVII, No. 2 (Summer), pp. 27-37.

Based on the work of the Language Centre group at Sheridan College-Brampton, this essay summarizes many of the pedagogical issues involved in incorporating computers into the Ontario college English program.

Smye, Randy. 1987. Ecology of computers and composition. Paper presented at the Ontario Council of Teachers of English Conference on Computers and English (February).

An introductory discussion of the changes in the context of composition brought by the computer, suggesting that the perceptions of teachers must change if the effects brought by modern communications tools are to be understood and applied in the classroom.

Sommers, Elizabeth. 1985. Integrating Composing and Computing, In Writing On-Line. Upper Montclair, New Jersey: Boynton/ Cook, pp. 3-10.

Sommers outlines issues and practices, noting among other things, that the student has to be taught how to use the wordprocessor in writing.

Sudol, Ronald A. 1985. Applied word processing: Notes on authority, responsibility, and revision in a workshop model. College Composition and Communication. 36, No. 3 (October), pp. 331-335.

Sudol has a number of pointers on using wordprocessors in a workshop situation, in particular mentioning that the wordprocessor gives the teacher more options in suggesting revision strategies and methods, from notes on electronic files, annotated printouts used to prompt discussion in interviews, to at-the-screen sessions of apprentice and mentor--the student in control of the keyboard. Useful note that we should teach the concept of addition (insertion) before deletion when we teach revision or development of text. Suggests that collaboration is a value to be gained in the workshop, and helps lead to maturity in writing.

Wilson, Paul. 1984. In the mode. Books in Canada. 13 No. 3 (March), pp. 7-12.

A professional writer describes the transformations in writing brought about by the wordprocessor.

Winograd, Terry. 1984. Computer software for working with language. Scientific American. (September), pp. 130-145.

A first-class summary of the software available for working with language, generalizing about the issues and values involved, and providing a lucid account of the Artificial Intelligence problem. An excellent introduction to the field of computers and language.

Witte, Stephen P., John A. Daly, Lester Faigley, and William R. Koch. 1983. An instrument for reporting composition course and teacher effectiveness in college writing. Research in the Teaching of English. 17, No. 3 (October), pp. 243-261.

A long, useful questionnaire. The paper shows what is being done in the area; this team has much experience with measuring apprehension.

Wresch, William. 1983. Computers and composition instruction: An update. College English. 45, No. 8 (December), pp. 794-799.

A useful summary article. Wresch also has edited a collection of essays (Wresch, William, ed. 1984. The Computer in Composition Instruction. Urbana, Illinois: National Council of Teachers of English). He looks at CAI, which includes the style-checker kind of program, and discusses wordprocessing. With the burgeoning of resources in computers becoming available to English departments, Wresch advocates careful planning and especially urges administrators to share in this in a realistic way.